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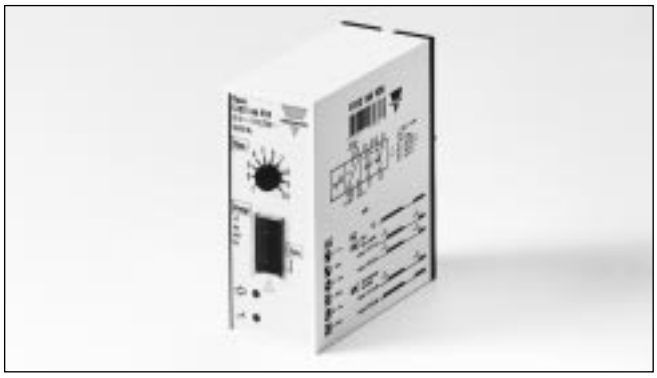
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Timers
Delay on Operate
Type S 102

CARLO GAVAZZI



- **Time ranges: 0.1 s to 10 h**
- **2 contact functions: - DPDT delay on operate**
  - One instantaneous, one delayed
- **Easy time and function setting**
- **Knob-adjustable time setting**
- **Automatic start functions**
- **Repeatability: ≤ 0.2%**
- **Output: 2 x 5 A SPDT relay**
- **Plug-in module, S-housing**
- **LED-indication for relay and power supply ON**
- **24 VAC/DC and 115 to 230 VAC power supply**
- **Cadmium-free contacts**
- **Timer in accordance with IEC 61812-1**

Product Description

Multi-voltage delay on operate timer with 6 selectable time ranges from 0.1 s up to 10 h for standard 11-pin circular sockets. Can be configured with one instantaneous output contact, which can be used in applications where an output is desired immediately when power supply is applied.

Ordering Key

S 102 166 924

Housing
Type/function
Output
Power supply

Type Selection

Plug	Output	Time range	Supply: 24 VAC/DC & 115-230 VAC
Circular	DPDT	0.1 s - 10 h	**S 102 166 924**

Time Specifications

Time ranges	
Selectable by DIP-switch	0.1 - 1 s 1 - 10 s 0.1 - 1 m 1 - 10 m 0.1 - 1 h 1 - 10 h
Setting accuracy	≤ 5%
Repeatability	≤ 0.2%
Time variation	
Within rated power supply and ambient temperature	≤ 0.05%/V ≤ 0.2%/°C
Reset	
Power supply interruption	≥ 200 ms

Output Specifications

Output		2 x SPDT relay
Rated insulation voltage		250 VAC (rms) (cont./elect.)
Contact ratings (AgNi)		µ (micro gap) (IEC 60947-5-1/IEC 60337)
Resistive loads	AC 1	5 A/250 VAC
	DC 1	5 A/24 VDC
Small inductive loads	AC 15	5 A/250 VAC
	DC 13	2 A/24 VDC
Mechanical life		≥ 30 x 10^6 operations
Electrical life	AC 1	≥ 10^5 operations (at max. load)
Operating frequency		≤ 7200 operations/h
Insulation voltage		
Rated insulation voltage		≥ 2.0 kVAC (rms) (cont./elect.)
Rated impulse withstand volt.		4 kV (1.2/50 µs) (cont./elect.) (IEC 60664)

Supply Specifications

Power supply AC connection		Overvoltage cat. III (IEC 60664)
Rated operational voltage		
Through pins 2 & 10		115-230 VAC, -15 to +15% 50/60 Hz, -5/+5 Hz
or pins 2 & 6		24 VAC, -15 to +15% 50/60 Hz, -5/+5 Hz
Voltage interruption		≤ 40 ms
Rated insulation voltage		None
Rated impulse withstand volt.		4 kV (1.2/50 µs) (pin 2 & 10)

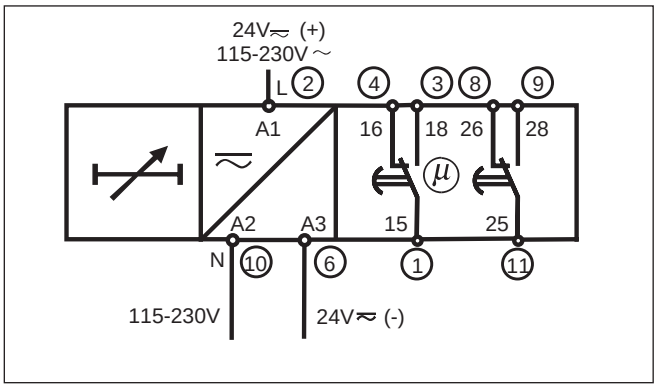
Power supply DC connection		Overvoltage cat. III (IEC 60664)
Rated operational voltage		
Through pins 2 & 6	924	24 VDC, -15 to +15% (pin 2 positive)
Voltage interruption		≤ 40 ms
Rated insulation voltage		None
Rated impulse withstand volt.		1 kV (1.2/50 µs) (pin 2 & 6)
Rated operational current		
AC supply		75 mA @ 230 VAC 40 mA @ 115 VAC 55 mA @ 24 VAC
DC supply		35 mA @ 24 VDC

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General Specifications

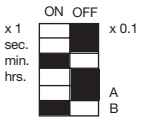
Power ON delay	≤ 200 ms
Power OFF delay	≤ 200 ms
Indication for	
Power supply ON	LED, green (flashing during time delay)
Timer output ON	LED, yellow
Environment	
Degree of protection	IP 20
Pollution degree	2 (IEC 60664)
Operating temperature	-20° to +50°C (-4° to +122°F)
Storage temperature	-50° to +85°C (-58° to +185°F)
Weight	100 g
Approvals	UL, CSA
CE-marking	Yes
EMC	Electromagnetic Compatibility
Immunity	Acc. to EN 50082-2
Emission	Acc. to EN 50081-1
Timer specifications	Acc. to IEC 61812-1

Wiring Diagram



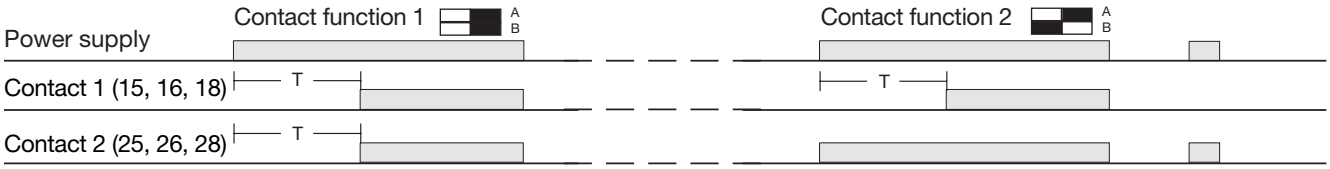
Function and Time Setting

DIP-switch selector



Shown example:
min. x 0.1, function 2

Operation Diagram



Mode of Operation

Functions selectable by DIP-switch

Contact function 1
DPDT delay on operate

The delay period begins when power supply is applied. At the end of the set delay, both relay contacts will operate and will not release until power supply is interrupted. If power supply is interrupted for at least 200 ms before the relay operates, the time circuit is reset to zero and the relay is ready for a new time period.

Contact function 2
One instantaneous, one delayed

Relay contact 2 operates instantaneously when power supply is applied. After expiration of the set delay, relay contact 1 operates.

Both contacts remain in ON-position until power supply is interrupted. After 200 ms the time relay is ready for renewed start.

Accessories

Socket◊	S 411
Hold down spring◊	HF
Mounting rack	SM 13
Socket cover	BB 4

Specifications are subject to change without notice (19.11.99)

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