

Timers

Delay on Operate

Type S 101



- Time ranges: 0.1 s to 10 h
- Easy time setting
- Knob-adjustable time setting
- Automatic start
- Repeatability: $\leq 0.2\%$
- Output: 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

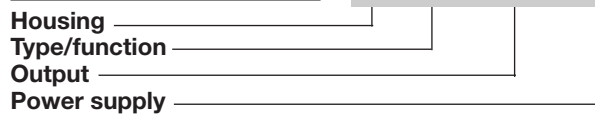
Product Description

Multi-voltage delay on operate timer with 6 selectable time ranges from 0.1 s up to 10 h for standard 11-pin cir-

cular sockets. Used to delay operation of equipment in industrial applications.

Ordering Key

S 101 156 924



Type Selection

| Plug | Output | Time range | Supply: 24 VAC/DC & 115-230 VAC |
|----------|--------|--------------|------------------------------------|
| Circular | SPDT | 0.1 s - 10 h | S 101 156 924 |

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 | $\leq 5\%$ |
| Repeatability | $\leq 0.2\%$ |
| Time variation Within rated power supply and ambient temperature | $\leq 0.05\%/V$ $\leq 0.2\%/^{\circ}C$ |
| Reset Power supply interruption | ≥ 200 ms |

Output Specifications

| | |
|---------------------------------|---|
| Output | 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 | $\geq 30 \times 10^6$ operations |
| Electrical life | AC 1 $\geq 10^5$ 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 μ s) (cont./elect.) (IEC 60664) |

Supply Specifications

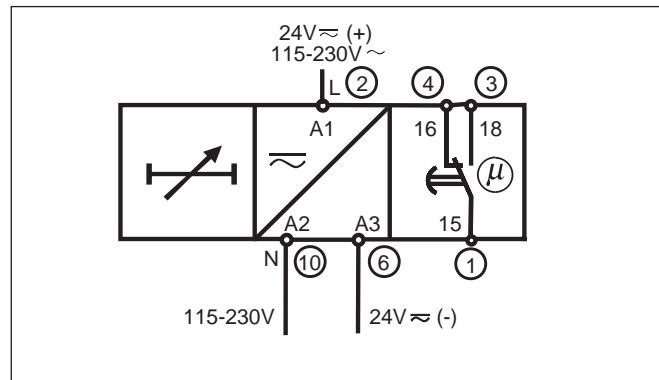
| | | | |
|---|--|---|---|
| Power supply AC connection Rated operational voltage Through pins 2 & 10 or pins 2 & 6 Voltage interruption Rated insulation voltage Rated impulse withstand volt. | Overvoltage cat. III (IEC 60664) 115-230 VAC, -15 to +15% 50/60 Hz, -5/+5 Hz 24 VAC, -15 to +15% 50/60 Hz, -5/+5 Hz ≤ 40 ms None 4 kV (1.2/50 μ s) (pins 2 & 10) | Power supply DC connection Rated operational voltage Through pins 2 & 6 924 Voltage interruption Rated insulation voltage Rated impulse withstand volt. | Overvoltage cat. III (IEC 60664) 24 VDC, -15 to +15% (pin 2 positive) ≤ 40 ms None 1 kV (1.2/50 μ s) (pins 2 & 6) |
| Rated operational current | | AC supply | 50 mA @ 230 VAC 25 mA @ 115 VAC 35 mA @ 24 VAC |
| | | DC supply | 20 mA @ 24 VDC |



General Specifications

| | |
|---------------------------------------|---|
| Power ON delay | ≤ 200 ms |
| Power OFF delay | ≤ 200 ms |
| Indication for Power supply ON | LED, green (flashing during time delay) |
| 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 |

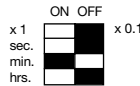
Wiring Diagram



Time Setting

DIP-switch selector

Shown example:
min. x 0.1



Operation Diagram



Mode of Operation

The delay period begins when power supply is applied. At the end of the set delay, the relay 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.

Accessories

| | |
|-------------------|-------|
| Socket◇ | S 411 |
| Hold down spring◇ | HF |
| Mounting rack | SM 13 |
| Socket cover | BB 4 |