

# Timers Multi-function Type S 1201

CARLO GAVAZZI



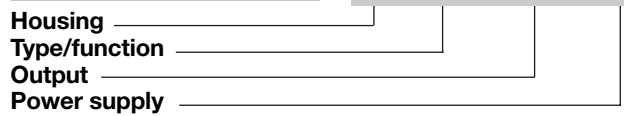
- 4 selectable functions:
  - Delay on operate
  - Interval timer
  - Symmetrical recycler (ON- or OFF-time first)
- 20 selectable time ranges: 0.15 s to 220 h
- Automatic start
- Knob-adjustable time within range
- Oscillator-controlled time circuit
- Repeatability deviation:  $\leq 1\%$
- Output: 10 A SPDT or 8 A DPDT relay
- Plug-in type module
- S-housing
- LED-indication for relay and power supply on
- AC or DC power supply

## Product Description

Multi-function, plug-in time relays with 20 selectable time ranges up to 220 h and 4 selectable modes of operation. Available in various voltages to cover applications monitored by power supply.

## Ordering Key

**S 1201 156 024**



## Type Selection

Plug	Output	Time range	Supply: 24 VAC	Supply: 115 VAC	Supply: 230 VAC	Supply: 24 VDC
Circular	SPDT	0.15 s-220 h	<b>S 1201 156 024</b>	<b>S 1201 156 115</b>	<b>S 1201 156 230</b>	<b>S 1201 156 724</b>
	DPDT	0.15 s-220 h	<b>S 1201 166 024</b>	<b>S 1201 166 115</b>	<b>S 1201 166 230</b>	<b>S 1201 166 724</b>

## Time Specifications

<b>Time ranges</b> Selectable by DIP-switch	0.15 s - 1.5 s 0.3 s - 3 s 0.6 s - 6 s 1.2 s - 12 s 2.5 s - 25 s 5 s - 50 s 10 s - 100 s 20 s - 200 s 40 s - 400 s 1.3 m - 13 m 2.6 m - 26 m 5 m - 50 m 10 m - 100 m 20 m - 200 m 40 m - 400 m 1.4 h - 14 h 2.8 h - 28 h 5.5 h - 55 h 11 h - 110 h 22 h - 220 h
<b>Time range accuracy</b>	0 to +10% on max. min. actual time $\leq$ set time
<b>Repeatability deviation</b>	$\leq 1\%$
<b>Time variation</b> Within rated power supply and ambient temperature	$\leq 0.05\%/V$ $\leq 0.2\%/^{\circ}C$
<b>Reset</b> Time and/or relay	Power supply interruption min. 200 ms

## Supply Specifications

<b>Power supply AC types</b>	Installation cat. III (IEC 60664)
Rated operational voltage through pins 2 & 10	230 115 024
Dropout tolerance	$\geq 40$ ms
Rated insulation voltage	$\geq 2.0$ kVAC (rms) (supply/elec.)
Rated transient protection volt.	4 kV (1.2/50 $\mu$ s) (line/neutral)
<b>Power supply DC type</b>	Installation cat. III (IEC 60664)
Rated operational voltage	24 VDC $\pm 15\%$ (pin 2 pos.)
Rated insulation voltage	None
Rated transient protection volt.	4 kV (1.2/50 $\mu$ s)
<b>Consumption</b>	AC supply DC supply
	2.5 VA 1.5 W

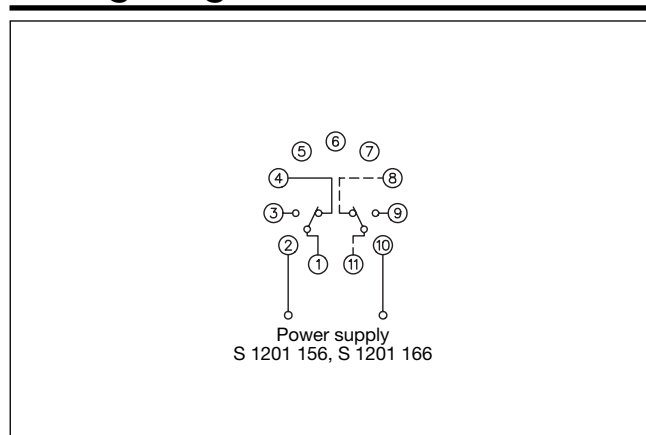
## Output Specifications

	S 1201 156	S 1201 166
<b>Output</b>	SPDT relay	DPDT relay
Basic electrical insulation	250 VAC (rms) (contact/electronics)	250 VAC (rms) (contacts/elec., contact/contact)
<b>Contact ratings</b> (AgCdO)	μ (micro gap)	μ (micro gap)
Resistive loads	AC 1 10 A/250 VAC (2500 VA) DC 1 1 A/250 VDC (250 W) or 10 A/25 VDC (250 W)	8 A/250 VAC (2000 VA) 0.4 A/250 VDC (100 W) 4 A/25 VDC (100 W)
Small inductive loads	AC 15 2.5 A/230 VAC DC 13 5 A/24 VDC	2.5 A/230 VAC 5 A/24 VDC
<b>Mechanical life</b>	≥ 30 x 10 <sup>6</sup> operations	≥ 30 x 10 <sup>6</sup> operations
<b>Electrical life</b>	AC 1 ≥ 2.5 x 10 <sup>5</sup> operations (at max. load)	≥ 2.5 x 10 <sup>5</sup> operations (at max. load)
<b>Operating frequency</b>	≤ 7200 operations/h	≤ 7200 operations/h
<b>Insulation voltages</b>		
Rated insulation voltage	≥ 2.0 kVAC (rms) (contact/electronics)	≥ 2.0 kVAC (rms) (contact/electronics)
Rated transient protection volt.	4 kV (1.2/50 μs) (contact/electronics) (IEC 60664)	4 kV (1.2/50 μs) (contact/electronics) (IEC 60664)

## General Specifications

<b>Power ON delay</b>	≤ 200 ms
<b>Power OFF delay</b>	≥ 200 ms
<b>Indication for</b>	
Power supply ON	LED, green
Output ON	LED, red
<b>Environment</b>	
Degree protection	IP 20 B
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)
<b>Weight</b>	
AC types/DC types	200 g/125 g
<b>Approvals</b>	UL, CSA
<b>CE-marking</b>	Yes

## Wiring Diagram



## Mode of Operation

### Delay on operate

The time period starts when power supply is applied. At the end of the set time period, the relay operates and does not release until power supply is interrupted for at least 200 ms.

of the set time period, the relay releases. Operation starts again when reapplying power supply after an interruption of at least 200 ms.

### Symmetrical recycler ON-time period first

When power supply is applied the relay operates and the time period starts. At the end of the first set time period, the

relay releases. At the end of the second set time period (of the same duration as the first), the relay operates again.

This sequence continues with equal long ON- and OFF-time periods until power supply is interrupted.

### Symmetrical recycler OFF-time period first

The time period starts when

power supply is applied. At the end of the first set time period, the relay operates. At the end of the second set time period (of the same duration as the first), the relay releases.

This sequence continues with equal long OFF- and ON-time periods until power supply is interrupted.

























## Accessories

Sockets◇	S 411
Hold down spring◇	HF
Mounting rack	SM 13
Socket covers	BB 4
Front mounting bezel	FRS2
Potentiometer lock	PL 3

For further information refer to "Accessories".

For other AC/DC voltages refer to "General Information".

## Function/Time Setting

Selection of function DIP-switch selector (1 & 2)	Time setting Knob-adjustable on scale in per cent of max. time.	Selection of time range DIP-switch selector (3 - 7).	
1. Delay on operate 	DIP-switches for selecting function and time are placed behind a small removable front plate on the time relay.	3 4 5 6 7 	0.15 s - 1.5 s 
2. Interval timer 			0.3 s - 3 s 
3. Recycler, ON-time period first 			0.6 s - 6 s 
4. Recycler, OFF-time period first 			1.2 s - 12 s 
			2.5 s - 25 s 
			5 s - 50 s 
			10 s - 100 s 
			20 s - 200 s 
			40 s - 400 s 
			1.3 m - 13 m 

## Operation Diagram

