



**Safety timer module with delayed contacts at energizing**

**Main functions**

- Timed circuits through safety system with self-monitoring and redundancy
- Suitable to control safety interlocked devices
- Small 22,5 mm housing
- Output contacts:
  - 1 NO safety contact,
  - 2 NC auxiliary contacts,
- Supply voltages:
  - 24 VAC/DC, 120 VAC, 230 VAC

**Utilization categories**

Alternate current: AC15 (50...60 Hz)  
 Ue (V) 230  
 Ie (A) 3  
 Direct current: DC13 (6 operations/minute)  
 Ue (V) 24  
 Ie (A) 6

**Markings, quality marks and certificates:**



Approval UL: E131787

**Complying with the requirements requested by:**

Low Voltage Directive 2006/95/EC,  
 Machinery Directive 2006/42/EC,  
 Electromagnetic Compatibility 2004/108/EC

**Technical data**

**Housing**

Made of polyamide PA 6.6 self-extinguishing, class V0 (UL94)  
 Protection degree: IP40 (housing), IP20 (terminals)  
 Dimensions: see page 4/141, shape A

**General data**

Safety category: up to category 4 according to EN 954-1 (dependent from the circuit structure)  
 Ambient temperature: from -25°C to +55°C  
 Mechanical endurance: >10 millions of operations  
 Electrical endurance: >100.000 operations  
 Pollution degree: outside 3, inside 2  
 Rated impulse with stand voltage (Uimp): 4 KV  
 Rated insulation voltage (Ui): 250 V  
 Over-voltage category: III  
 Weight: 0,2 Kg

**Power supply**

Rated operating voltage (Un): 24 VAC/DC; 50...60 Hz  
 120 VAC; 50...60 Hz  
 230 VAC; 50...60 Hz  
 Max residual ripple in DC: 10%  
 Supply voltage tolerance: ±15% of Un  
 Rated power consumption AC: < 5 VA  
 Rated power consumption DC: < 2 W

**Control circuit**

Protection against short circuits: resistance PTC, I<sub>h</sub>=0,5 A  
 Operating time of PTC: intervention > 100 ms, reset > 3 s  
 Operating time t<sub>A</sub>: see "Code structure"  
 Releasing time in absence of power supply t<sub>R</sub>: 40 ms

**In conformity with standards:**

IEC 60947-1, EN 60947-1, IEC 60204-1, EN 60204-1, EN ISO 13849-1, EN 999, EN 1037, EN ISO 12100-1, EN ISO 12100-2, EN ISO 13850, IEC 529, EN 60529, EN 61000-6-2, EN 61000-6-3, EN 62326-1, EN 60664-1, UL 508, CSA C22.2 n° 14-95

**Output circuit**

Output contacts: 1 NO safety contact,  
 2 NC auxiliary contacts,  
 forced guided contacts  
 Contacts type: silver alloy  
 Contacts material: silver alloy  
 Max switching voltage: 230/240 VAC; 300 VDC  
 Max switching current per contact: 6 A  
 Conventional free air thermal current I<sub>th</sub>: 6 A  
 Contacts resistance: ≤ 100 mΩ  
 Contact protection fuse: 6 A  
 The number and the load capacity of output contacts can be increased by using expansion modules or contactors: see page 4/135 - 4/139

**Code structure**

**CS FS-01V024-TF1**

Operating time t <sub>A</sub>		Operating time t <sub>A</sub>	
<b>0</b>	Fixed time (see TFx)	<b>TF0.5</b>	fixed 0,5 s
<b>1</b>	from 0,3 to 3 s, step 0,3 s	<b>TF1</b>	fixed 1 s
<b>2</b>	from 1 to 10 s, step 1 s	<b>TF3</b>	fixed 3 s
<b>3</b>	from 3 to 30 s, step 3 s	<b>TF10</b>	fixed 10 s
<b>4</b>	from 30 to 300 s, step 30 s		
Kind of connection		Supply voltage	
<b>V</b>	screw terminals	<b>024</b>	24 VAC/DC ±15%
<b>M</b>	connector with screw terminals	<b>120</b>	120 VAC ±15%
<b>X</b>	connector with spring terminals	<b>230</b>	230 VAC ±15%

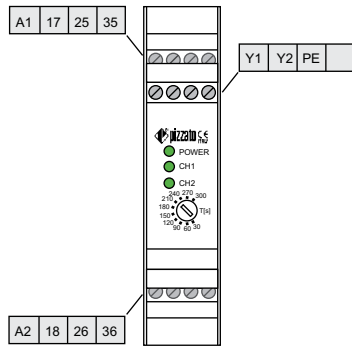
**Data type approved by UL**

Rated operating voltage (Un): 24 VAC/DC; 50...60 Hz  
 120 VAC; 50...60 Hz  
 230 VAC; 50...60 Hz  
 Rated power consumption AC: < 5 VA  
 Rated power consumption DC: < 2 W  
 Max switching voltage: 230 VAC  
 Max switching current per contact: 6 A  
 Utilization category: C300

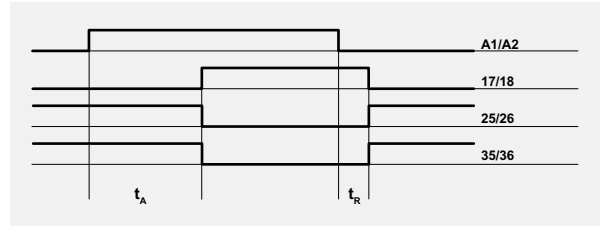
Note:  
 - Use 60° or 75 °C copper (Cu) conductor and wire size No. 30-12 AWG.  
 - Terminal tightening torque of 5-7 Lb-In.  
 - Only for 24 VAC/DC version, supply from remote class 2 source or limited voltage and limited energy.  
 - Surrounding air of 55 °C.

**Safety module CS FS-0**

**Terminals layout**

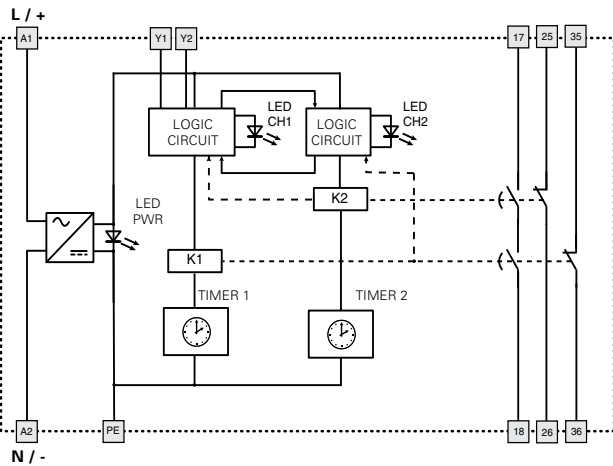


**Operations diagram**



Legend:  
 $t_A$ : Adjustable operating time (see "Code structure")  
 $t_R$ : Releasing time in absence of power supply

**Internal wiring diagram**



**Circuit structure**

