

Overview



7PV15 timing relay

Electronic timing relays for general use and in control systems, mechanical engineering and infrastructure with:

- 1 or 2 CO contacts
- Multifunction or monofunction
- Wide voltage range or combination voltage
- Single or selectable time setting ranges
- Switch position indication and voltage indication by LED

Standards

The timing relays comply with:

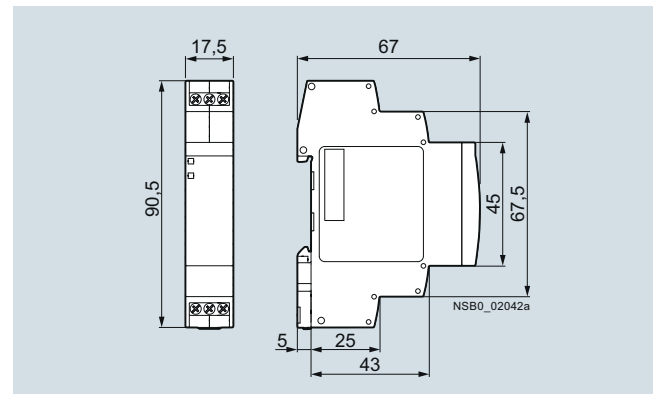
- IEC 60721-3-3 "Classification of environmental conditions"
- IEC 61812-1 "Time relays for industrial and residential use"
- IEC 61000-6-2 and EN 61000-6-4 "Electromagnetic compatibility"
- IEC 60947-5-1 "Low-voltage switchgear and controlgear – Electromechanical control circuit devices"
- DIN 43880 "Built-in equipment for electrical installations; overall dimensions and related mounting dimensions"

Multifunction

The functions of the 7PV1508-1A multifunctional timing relays can be set by means of rotary switches. The identification letters A to G are printed on the front alongside the rotary selector switch of the unit. The related function can be found in the form of a bar graph on the side of the device.

Enclosure version

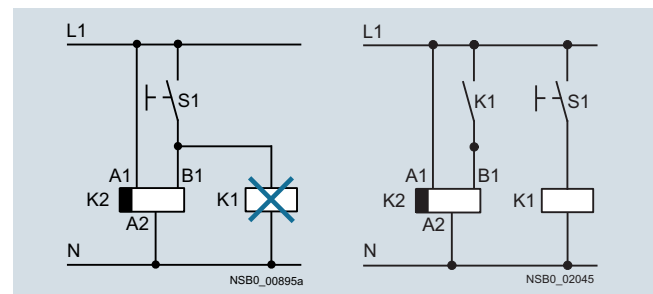
All timing relays are suitable for snap-on mounting onto TH 35 standard mounting rails according to IEC 60715. The enclosure complies with DIN 43880, 1 MW.



Dimensions

Note:

The activation of loads parallel to the start input is not permissible when using AC control voltage (see diagrams).



Diagrams

Article No. scheme

Digit of the Article No.	1 st - 5 th	6 th	7 th	8 th	9 th	10 th	11 th	12 th
	□□□□□	□	□	-	□	□	□	0
Timing relays in industrial enclosure, 17.5 mm	7 P V 1 5							
Functions/time setting ranges		□	□					
Connection type				□				
Contacts					□			
Rated control supply voltage						□	□	
Example	7 P V 1 5 0 8 - 1 A W 3 0							

Note:

The Article No. scheme is presented here merely for information purposes and for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the catalog in the Selection and ordering data.

Relays

Timing Relays

7PV15 timing relays in enclosure, 17.5 mm


Benefits

- Wide voltage range 12 to 240 V AC/DC
- High switching capacity, e.g. AC-15 at 230 V, 3 A
- Combination voltage, e.g. 24 V AC/DC and 200 to 240 V AC
- Changes to the time setting range during operation
- Changes to the function in the de-energized state
- High level of functionality and a high repeat accuracy of timer settings
- Integrated surge suppressor
- Function charts printed on the side of the device for reliable device adjustment

Application

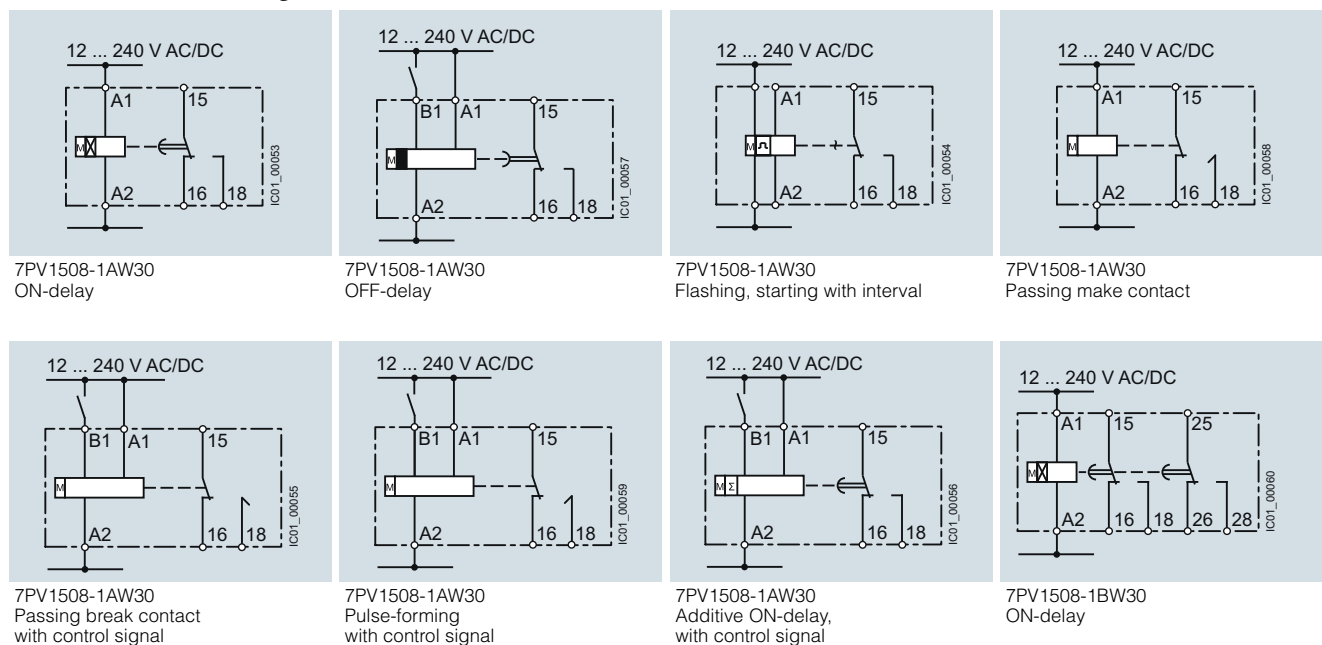
Timing relays are used in control, starting and protective circuits for all switching operations involving time delays, e.g. in non-residential buildings, airports, industrial buildings etc.

Technical specifications

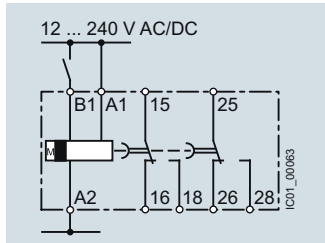
Type	7PV15	
Rated insulation voltage Pollution degree 2, overvoltage category III	V AC	300
Permissible ambient temperature	°C	-25 ... +55
• During operation	°C	-40 ... +70
• During storage		
Operating range at excitation¹⁾		0.85 ... 1.1 x U_s at V AC/DC, 50/60 Hz 0.8 ... 1.25 x U_s 24 V DC 0.95 ... 1.05 times the rated frequency
Rated operational current I_e		
• AC-15 at 24 ... 240 V, 50 Hz	A	3
• DC-13 at		
- 24 V	A	1
- 125 V	A	0.2
Uninterrupted thermal current I_{th}	A	5
Mechanical endurance	Operating cycles	1×10^6
Electrical endurance at I_e	Operating cycles	1×10^5
Connection type	 Screw terminals	
• Terminal screw		M3 (for standard screwdriver, size 2 and Pozidriv 2)
• Solid	mm ²	1 x (0.2 ... 2.5)
• Finely stranded with end sleeve	mm ²	1 x (0.25 ... 1.5)
• Finely stranded without end sleeve	mm ²	1 x (0.2 ... 1.5)
• AWG cables, solid or stranded	AWG	1 x (24 ... 14)
• Tightening torque	Nm	0.4 ... 0.5

¹⁾ If nothing else is stated.

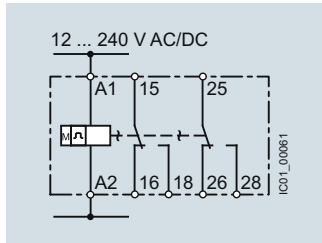
7PV15 internal circuit diagrams



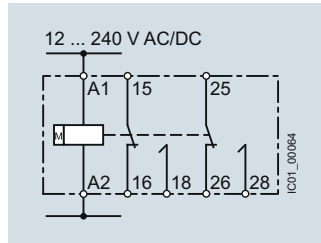
7PV15 internal circuit diagrams (continued)



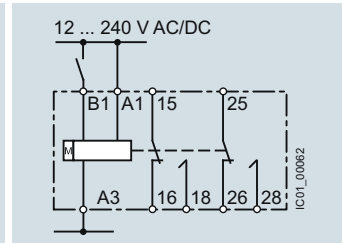
7PV1508-1BW30
OFF-delay
with control signal



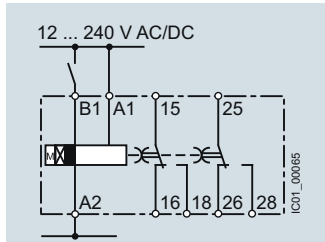
7PV1508-1BW30
Flashing,
starting with interval



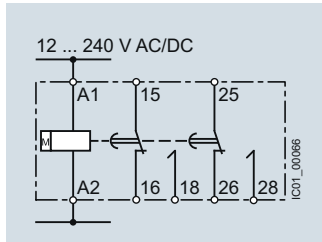
7PV1508-1BW30
Passing make contact



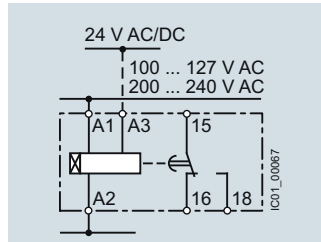
7PV1508-1BW30
Pulse-forming
with control signal



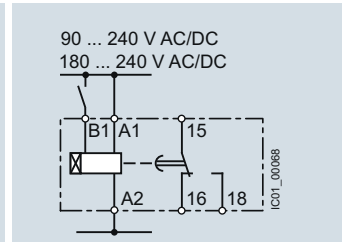
7PV1508-1BW30
ON and OFF-delay



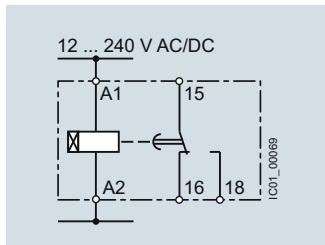
7PV1508-1BW30
Fixed pulse after ON-delay



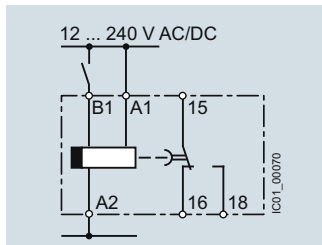
7PV151.-1AQ30, 7PV151.-1AP30
ON-delay



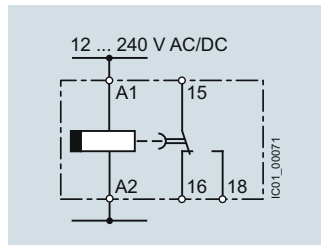
7PV1518-1AJ30, 7PV1518-1AN30
ON-delay



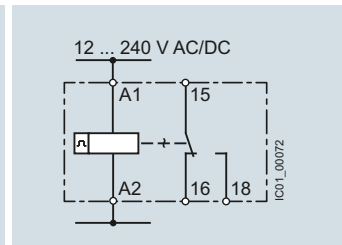
7PV1518-1AW30
ON-delay



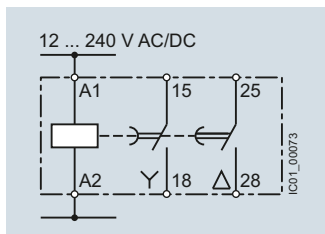
7PV1538-1AW30
OFF-delay
with control signal



7PV1540-1AW30
OFF-delay
without control signal



7PV1558-1AW30
Clock-pulse relay



7PV1578-1BW30
Wye-delta

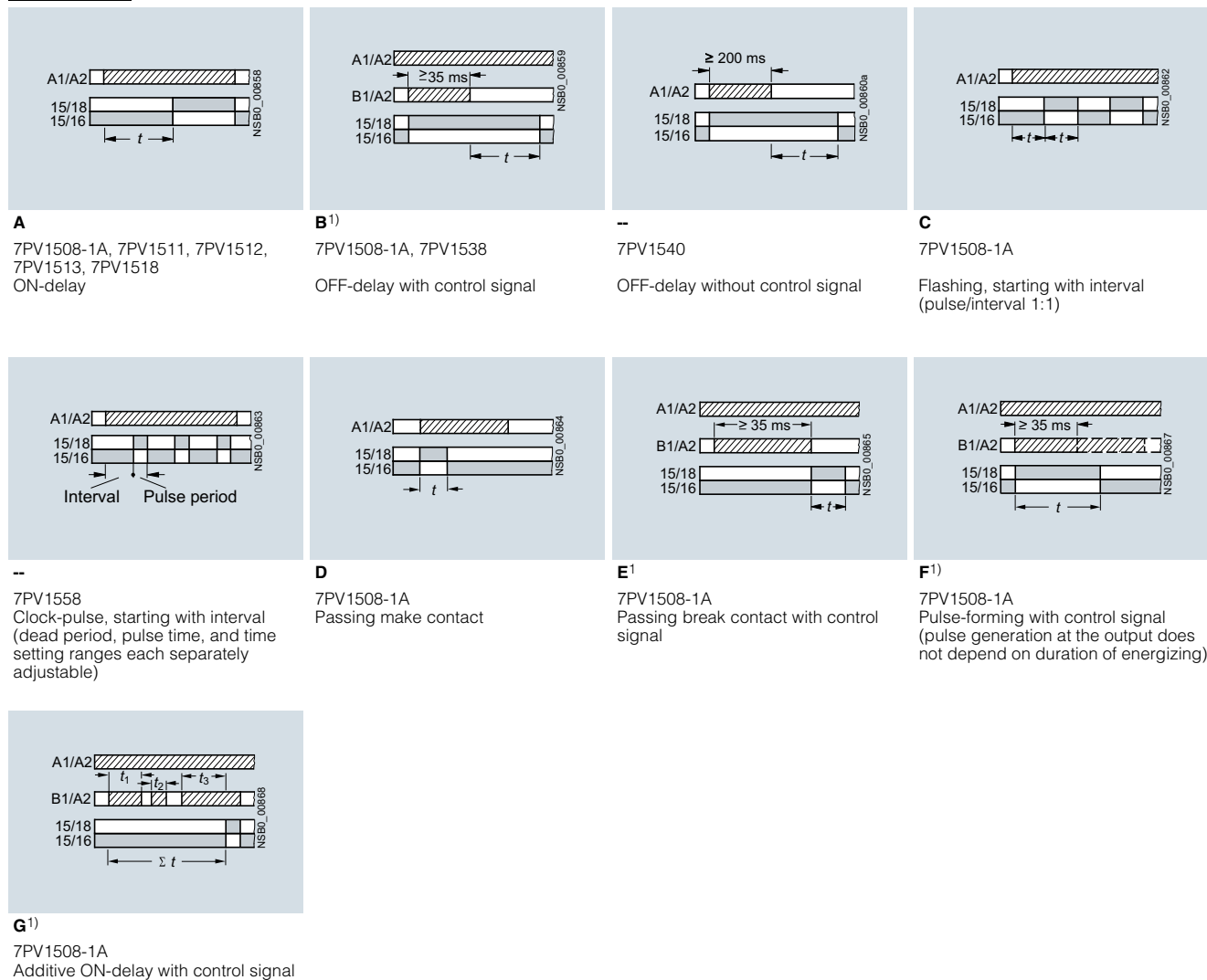
Relays

Timing Relays

7PV15 timing relays in enclosure, 17.5 mm

7PV15 function diagrams

1 CO contact



Legend

A ... G Identification letters for 7PV1508

▨ Timing relay energized

■ Contact closed

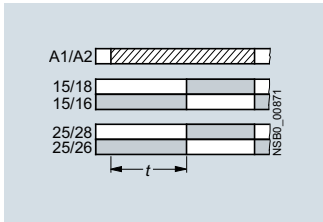
□ Contact open

¹⁾ Note on function with start contact: A new control signal at terminal B, after the operating time has started, resets the operating time to zero (retriggerable). This does not apply to E, F and G, which are not retriggerable.

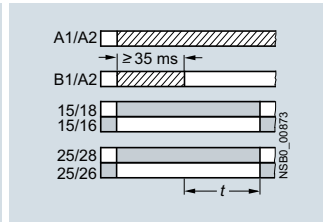
Note:

With the 7PV1508-1A multifunctional relay the identification letters A to G are printed on the front alongside the rotary selector switch of the unit. The related function can be found in the form of a bar graph on the side of the device.

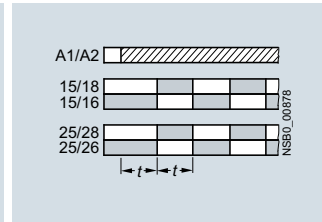
2 CO contacts



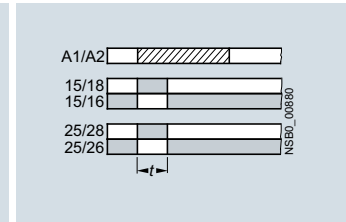
A
7PV1508-1B
ON-delay



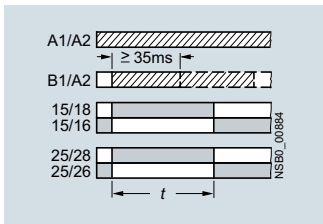
B1)
7PV1508-1B
OFF-delay with control signal



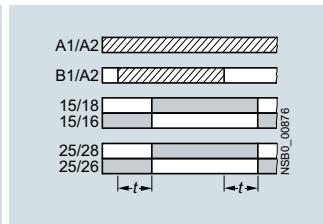
C
7PV1508-1B
Flashing, starting with interval
(pulse/interval 1:1)



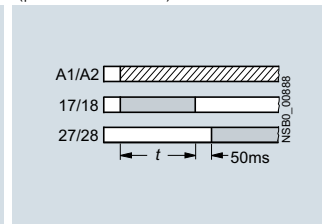
D
7PV1508-1B
Passing make contact



F1)
7PV1508-1B
Pulse-forming with control signal
(pulse generation at the output does
not depend on duration of
energizing)

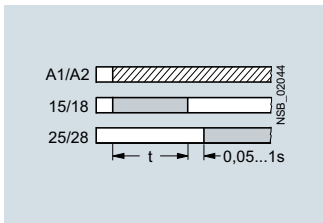


H1)
7PV1508-1B
ON-delay and OFF-delay
with control signal



I
7PV1508-1B
Fixed pulse after ON-delay

2 NO contacts



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7PV1578
Wye-delta function²⁾

Legend

A ... D, F, H, I Identification letters for 7PV1508

▨ Timing relay energized

■ Contact closed

□ Contact open

¹⁾ Note on function with start contact: A new control signal at terminal B, after the operating time has started, resets the operating time to zero (retriggerable). This does not apply to E, F and G, which are not retriggerable.

²⁾ With 7PV1578 the contacts 16 and 26 are not needed for the wye-delta function.

Note:

With the 7PV1508-1B multifunctional relay the identification letters A to D, F, H, I are printed on the front alongside the rotary selector switch of the unit. The related function can be found in the form of a bar graph on the side of the device.

Relays

Timing Relays

7PV15 timing relays in enclosure, 17.5 mm

Selection and ordering data



7PV1508-1AW30



7PV1512-1AP30



7PV1518-1AW30



7PV1538-1AW30



7PV1540-1AW30



7PV1558-1AW30



7PV1578-1BW30

Version	Time setting range t adjustable by rotary switch to	Rated control supply voltage U_s		DT	Screw terminals	PU (UNIT, SET, M)	PS*	PG
		50/60 Hz AC V	DC V		Article No.	Price per PU		

7PV1508 timing relays, multifunction, 7 time setting ranges

The functions can be adjusted by means of rotary switches. The same potential must be applied to terminals A. and B.

With LED and 1 CO contact, 7 functions	0.05 ... 1 s 0.5 ... 10 s 5 ... 100 s	12 ... 240	12 ... 240	▶	7PV1508-1AW30	1	1 unit	41H
With LED and 2 CO contacts, 7 functions	30 s ... 10 min 3 min ... 1 h 30 min ... 10 h 5 ... 100 h	12 ... 240	12 ... 240	▶	7PV1508-1BW30	1	1 unit	41H

7PV151. timing relays, ON-delay, 1 time setting range

With LED and 1 CO contact	0.05 ... 1 s	24/200 ... 240	24	▶	7PV1511-1AP30	1	1 unit	41H
	0.5 ... 10 s	24/100 ... 127	24	▶	7PV1512-1AQ30	1	1 unit	41H
		24/200 ... 240	24	▶	7PV1512-1AP30	1	1 unit	41H
	5 ... 100 s	24/100 ... 127	24	▶	7PV1513-1AQ30	1	1 unit	41H
24/200 ... 240		24	▶	7PV1513-1AP30	1	1 unit	41H	

7PV1518 timing relays, ON-delay, 7 time setting ranges

With LED and 1 CO contact	0.05 ... 1 s	12 ... 240	12 ... 240	▶	7PV1518-1AW30	1	1 unit	41H
	0.5 ... 10 s	90 ... 127	90 ... 127	▶	7PV1518-1AJ30	1	1 unit	41H
	5 ... 100 s	180 ... 240	180 ... 240	▶	7PV1518-1AN30	1	1 unit	41H
	30 s ... 10 min							
	3 min ... 1 h							
	30 min ... 10 h							
	5 ... 100 h							

7PV1538 timing relays, OFF-delay, with control signal, 7 time setting range

With LED and 1 CO contact	0.05 ... 1 s	12 ... 240	12 ... 240	▶	7PV1538-1AW30	1	1 unit	41H
	0.5 ... 10 s							
	5 ... 100 s							
	30 s ... 10 min							
	3 min ... 1 h							
	30 min ... 10 h							
	5 ... 100 h							

7PV1540 timing relays, OFF-delay, without control signal, 7 time setting ranges

With LED and 1 CO contact	0.05 ... 1 s	12 ... 240	12 ... 240	▶	7PV1540-1AW30	1	1 unit	41H
	0.15 ... 3s							
	0.3 ... 6 s							
	0.5 ... 10 s							
	1.5 ... 30 s							
	3 ... 60 s							
	5 ... 100 s							

7PV1558 timing relays, clock-pulse relay, 7 time setting ranges

With LED and 1 CO contact	0.05 ... 1 s	12 ... 240	12 ... 240	▶	7PV1558-1AW30	1	1 unit	41H
	0.5 ... 10 s							
	5 ... 100 s							
	30 s ... 10 min							
	3 min ... 1 h							
	30 min ... 10 h							
	5 ... 100 h							

7PV1578 timing relays, wye-delta function, 7 time setting ranges

With LED and 2 NO contacts, dead interval 0.05 ... 1 s adjustable	0.05 ... 1 s	12 ... 240	12 ... 240	▶	7PV1578-1BW30	1	1 unit	41H
	0.5 ... 10 s							
	5 ... 100 s							
	30 s ... 10 min							
	3 min ... 1 h							
	30 min ... 10 h							
	5 ... 100 h							