

Pulse delay / Signal filter / Pulse filter

SF3

Characteristics:

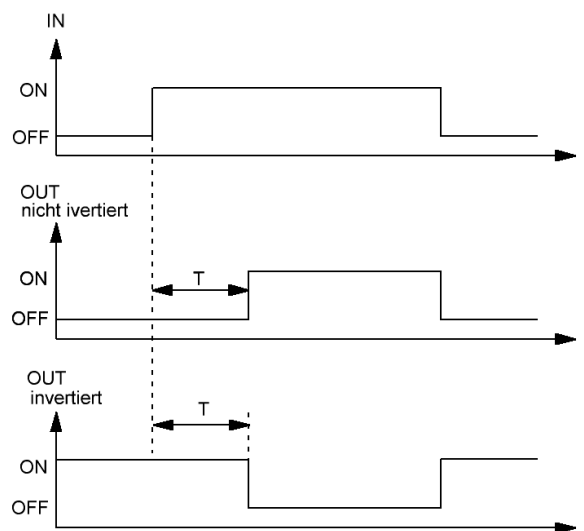
- 1ms - 14s Pulse delay, freely adjustable
- Output 24VDC/100mA
- Output inverting / not inverting
- Status display in output
- Supply 24VDC
- for mounting rail mounting TS35
- can be mounted in a row via jumpers
- Tension clamp connection
- Design 6,2mm
- high reliability, 5 years warranty



Description

The SF3 series pulse delay devices are used for signal delay of digital pulses. Thus it is possible to suppress short interference pulses or to provide control signals with a switching delay. Time ranges from 1ms to 14s are freely adjustable via dip switches and potentiometers. The output signal can also be switched to inverting or non-inverting, via dip switches (configuration see following table). The switching status is indicated by an LED in the output. The module requires an auxiliary power of 24Vdc and can be snapped onto TS35 mounting rail.

Impulsdiagramm:



Hint:

This module is a real pulse delay. The input signal is thus output delayed by the set time and thus also shortened by this time. The output signal is switched off at the same time as the input pulse is switched off (see pulse diagram). It is NOT a dead time element which would maintain the input pulse length and only shift it in time.

Attention:

If the switches are adjusted, the module must be disconnected from the power supply for a short time. Only after the supply voltage has been switched on again the new switch position become active again.

Application

Signal delay for suppression of interference pulses at PLC, SPS etc.

Time relay (pick-up delay)

Ordering key:

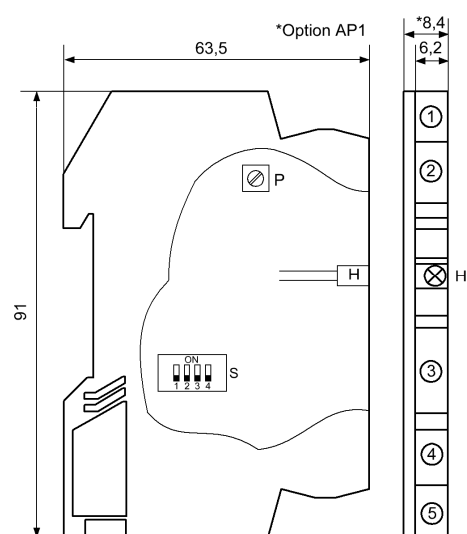
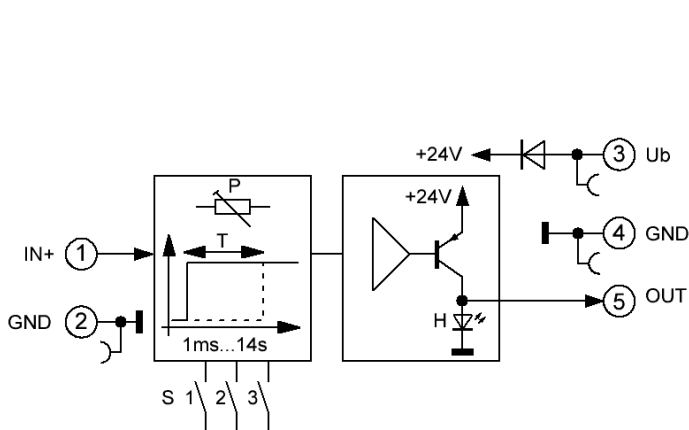
Type: Input level:

SF3-1 24VDC

SF3-2 5VDC

Settings:

Function		S1	S2	S3
Delay (T)	1ms ... 14ms	off	off	X
Delay (T)	10ms ... 140ms	on	off	X
Delay (T)	0,1s ... 1,4s	off	on	X
Delay (T)	1s ... 14s	on	on	X
Output	not inverting	X	X	off
Output	Inverting	X	X	on



Technical data

Supply:

Supply voltage : 19,2...30VDC (Ucc)
Power consumption : 20mA + Load

Input:

Switching level	:		Low:	High:
SF3-1	:	16,8...30V	< 3V	>10V
Input current	:	3,5...7mA		
SF3-2	:	3,75...6,25V	< 1V	> 3V
Input current	:	1,5...3,3mA		

Output:

Output voltage : Ucc – 1V
Output current : max. 100mA, short circuit proof
Trigger pulse width : ≥1ms
Delay : 1ms...14s adjustable / (Special time ranges on request)

General data:

Operating temperature : 0...50°C
Storage temperature : -25...+85°C, condensation before putting into operation is not allowed
MTBF : 460 years mean time between failures – according to EN 61709 (SN 29500).
Requirements: Stationary operation in clean rooms, average ambient temperature 40 °C, no aeration, continuous operation
CE conformity : EN 61326-1, EN 61000-4-2/3*/4/5/6*, EN 61000-6-4
* small deviations are possible during measurements

Body:

Dimension : See drawing, 6,2mm terminal block body, 6,2x63,5x91mm
Material : PA 6, 6 / V2
Protection category : IP00, IP20 with side cover/end cover plate
Connection : Spring force connection 0, 2 - 4mm², inflexible, 0, 2 – 2,5mm, flexible
Contact load with link plugs max. 24A
Fixing : Snap-on mounting for norm rail TS35
Mounting position : As you like / Mountable side by side
Weight : 21g

Note on safety:



Disconnect the power supply before attempting to open the unit.

During the operation of this module it is possible that parts of the module, even there is extra-low voltage, (for example shunt measurement) are under dangerous voltage! Therefore a non-observance of this caution may cause damage of property or physical injury.

Only trained qualified personnel should install or operate the unit. Before installation the qualified personnel should read the documentation and should familiarize themselves with the unit.

If there is visible damage to the body of the unit it should be immediately replaced and not put into operation.



Please ensure that there is a sufficient prevention against electrostatic discharge during installation of the unit.

Installation Information:

Pay attention and make sure the unit is far away from mounted sources that may disturb the device such as magnetic coils, transformers, frequency converters etc.

Wiring advice:

Use only shielded cables. The shield is to be connected extensively to ground. Do not mix power- and signal-wires/cables in the same cable tray.

Limited warranty:

The LEG Industrie-Elektronik GmbH warranted that the product does not have any material or processing defects in a period of 5 years after date of delivery.

It is up to the choice of LEG to repair or to exchange an inoperative unit.

Subsequent damages or any claim for indemnification above the functionality of the unit are excluded.

This limited warranty is only valid if ...

1. the product was installed and put into operation according to the LEG operation documentation;
2. the technical configuration of the power supply was abided;
3. the product was not used for unintended purposes;
4. there were no unauthorized modifications or manipulations, misuse or repairs without previous agreement from LEG .

Our Terms of Trade are based on the "General Conditions for the supply of products and services of the Electrical and Electronics Industry" including the "Complementary Clause: Extended Reservation of Property" of the ZVEI e.V. (German Association of Electrical Manufacturers).

Miscellaneous:

We expressly reserve the right, without previous notice, to correct errors contained in any data of this information brochure, and to make alterations to the program and technical modifications.