Safety Timer F128

Time relay off-delayed

Characteristics

- Stop category 1
- Safety category 3
- 2 Safety contacts
- Time ranges up to 30s
- Infinitely adjustable
- Single- or dual channel operation
- LED indication for supply voltage and active channels

DIN EN 60204 Section 1/ VDE 0113 Section 1 (11/98) prescribes that power circuits with a safety function must be specified as per Section 9.4.

In such safety circuits auxiliary contactors must intervene to guarantee redundancy so that, despite the occurrence of a fault in one of the auxiliary contactors, the safety circuit remains operative.

In every on- off cycle of the machine, the auxiliary contactors must be checked automatically at least once to ensure correct opening and closure of the contacts.
Safety timer **F128** fulfils this requirement – EN954-1 to the safety grade 3.

The redundant structure with two independant safe timer circuits guarantees, that the required time delay will not be exceeded.

The **F128** is suitable for single- or dual channel operation depending on the required safety grade.

Application examples are e.g. delayed unlock of a safety gate latch, controlled run down of a machine in case of E-stop activation or tightening of material until the machine has come to standstill.

Mode of Operation

With supply voltage on terminals A1-A2 and closed contacts via terminals B11-B12 and B21-B22, both internal relays of **F128** will be activated and the safety circuits are closed.
Three LEDs in the front give indication of the power supply and state control of the relays.

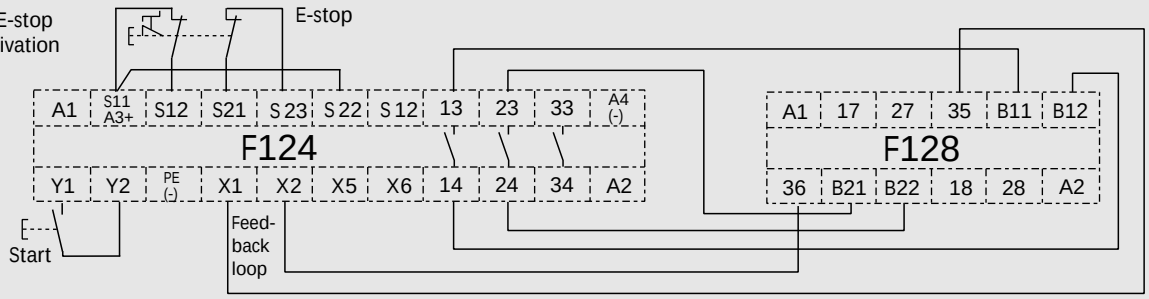
With breaking of the links between B11-B12 or B21-B22 the timing function begins and the safety contacts will open at the end of the delay period.

Re-activation during the running time will cause a reset of the time function and the relays remain activated.

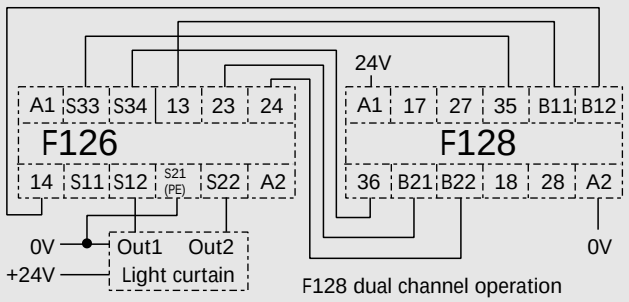
Control contact 35-36 may be linked with the feedback loop of the activating safety relay for state control of the **F128**.

Wiring Example 1

Dual channel E-stop circuit and activation of **F128**

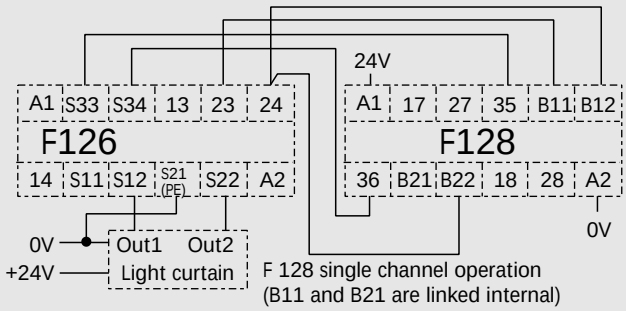


Wiring Example 2



F128 dual channel operation

Wiring Example 3



F 128 single channel operation
(B11 and B21 are linked internal)

Technical Data

Rated voltage	24 $V_{AC/DC}$
Voltage range	0.85 to 1.1 x rated voltage
Power consumption	Approx. 2.5 W
Rated insulation voltage	250 V
Creep distance and gaps	Overvoltage category III Pollution level 2 to DIN VDE 0110-1 (04/97)
Test voltage	2.5 kV
Ambient temperature	- 5 °C to +55 °C
Mode of protection	Terminals IP 20, IP 40 casing to DIN VDE 0470- 1 (11/92)
Switching capacity	250 V_{AC}; 1200 VA / 24 V_{DC}; 144 W, preferably with spark arrest
Thermic current I_{th}	Max. 6 A in one current path
Utilisation categorie	AC-15 250 V 5 A; DC-13 24 V 3 A
Timing accuracy	≤ ± 0.5% repetition accuracy / constant conditions
Adjustment accuracy	±5% from end of scale ; ±10% linearity
Temperature influence	< 0.1% / °C from 0-55 °C
Response time	30 ms
Output contacts	2 N/O (safety contacts) 1 N/C (control contact)
Mechanical lifetime	10^7 switching cycles
Switch material	Ag Sn O_2 / 0.5µ Au
Terminals	Terminal box with wire protection
Line cross section	Rigid 4 mm², flexible 2.5 mm² Connecting lead to be stripped up to max. 4 mm
Control circuit	Approx. 24 V_{DC}
Contact protection	Screwed-type fuse: max 6 A slow blow Auto circuit breaker: max C10 A
Weight	165 g

Models and Ordering Data

Contacts		2 N/O Safety contacts 1 N/C Control contact
Rated voltage		24 $V_{AC/DC}$
Type F 128		**Order No.**
time range	0.15-3 s	074 00057
	0.5-10 s	074 00058
	1.5-30 s	074 00059

BG

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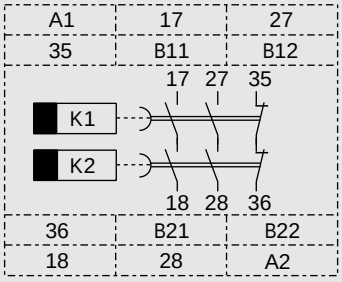
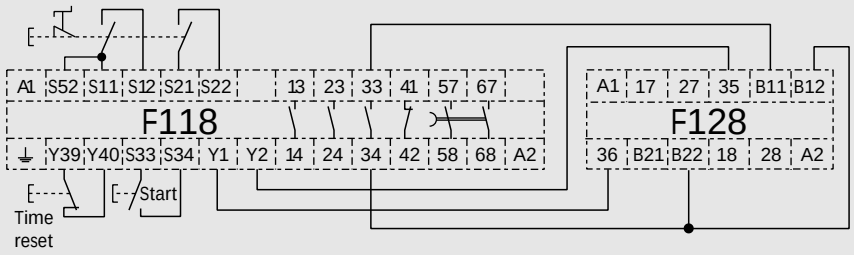
Circuit Diagram

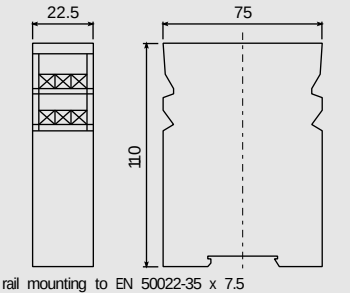


Wiring Example 4



Combination F118 and F128: 2 separate time circuits each with 2 safety contacts
(Contacts B11 and B21 are linked internal)

Dimensional Diagram



DIN rail mounting to EN 50022-35 x 7.5

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