

# Application examples

## C6700

### Applications

The C 6700 safety combination can be used in EMERGENCY STOP circuits according to EN 418 and in safety circuits according to EN 60 204-1 (11.98), e.g. for moving covers and safety gates. Safety category 3 according to DIN EN 954-1 or SIL2 according to IEC 61508 can be achieved, depending on the external circuits.

### Functions and connections

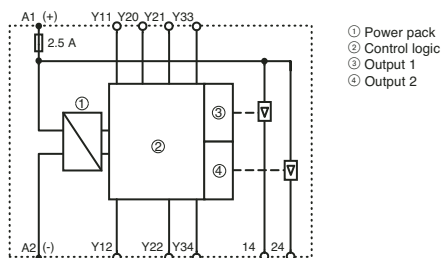
The C 6700 safety relay has two solid-state outputs. Three LEDs indicate the operating state and the function. During operation, all internal circuit elements are cyclically monitored for faults. The EMERGENCY STOP button or the position switch are connected to terminals Y11, 12 or Y21, 22. The ON button is connected in series to the NC contacts of the external actuators (feedback loop) to terminals Y33, 34. The C 6700 safety relay and the activated contactors K1 and K2 must have the same frame potential. Safety category 3 to EN 954-1 is achieved only in combination with 2 external actuators with positively driven feedback contacts.

**7** Use a power pack to IEC 60536 safety class III (SELV or PELV) for power supply!

### Terminal marking

Supply voltage	A1	L/+
	A2	M
Inputs	Y11, 12	Channel 1 EMERGENCY STOP or position switch
	Y21, 22	Channel 2 EMERGENCY STOP or position switch
	Y20	Single channel switch
Outputs	Y33, 34	ON button, feedback loop
	14, 24	Solid-state outputs

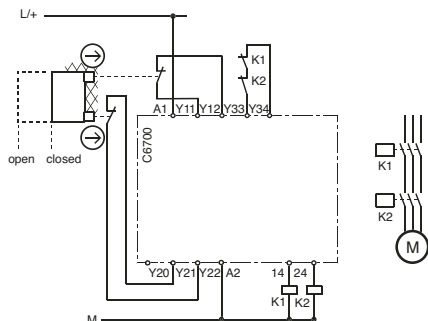
### Internal circuit



- ① Power pack
- ② Control logic
- ③ Output 1
- ④ Output 2

### Two channel autostart for safety gate monitoring

Category 3/SIL2



### Operation

LEDs			Operation			
POWER	RUN	FAIL	PS	E-STOP	ON	Outputs
☀	☀	●	ON	non activated	activated	on
☀	●	☀		activated	non activated	off
☀	●	●		non activated	non activated	off

### Faults

☀	●	☀	• Defect in electronic • Crossover in EMERGENCY STOP circ.	off
●	●	●	No supply voltage	

### Fault clearance

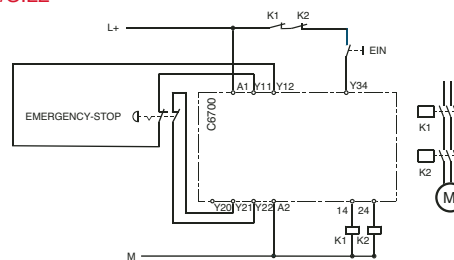
1. Switch supply voltage off.
2. Clear fault or replace device.
3. Switch supply voltage back on.

### Cable length

for 2 x 1.5mm<sup>2</sup> 150nF/km max. 2000m total cable length for sensors

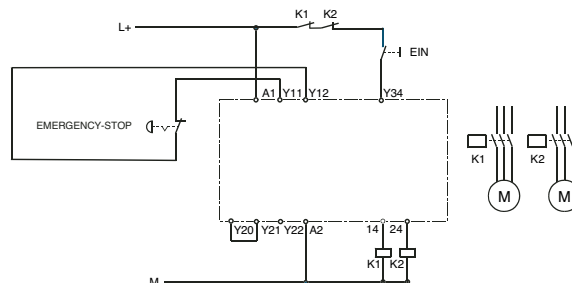
### EMERGENCY STOP, single channel, with monitored start

Category 3/SIL2



### EMERGENCY STOP, single channel, with monitored start

Category 2/SIL1



### Single channel autostart for safety gate monitoring

Category 2/SIL1

