

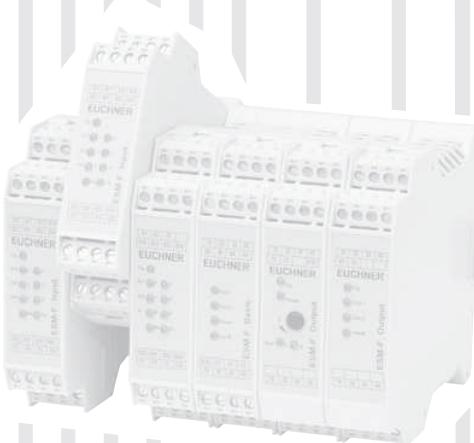
Selection table for safety modules ESM-F

Safety module

BSN	Base unit							
BMN	Base unit with diverse inputs							
ISI	Input module 1-channel or 2-channel							
IMI	Input module 2-channel with diverse inputs							
I3I	Input module 2-channel							
ILI	Input module 2-channel, without short circuit/earth fault/ground fault monitoring							
OSN	Output module							
OTN	Output module time-delayed, time adjustable							
OT05N	Output module time-delayed, fixed time 0.5 s							

Category according to EN 954-1

K	Category according to EN 954-1							
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Inputs

E1	1-channel							
E2	2-channel							

Outputs

SU	Safety contacts non-time-delay							
SV	Safety contacts time-delay							
M	Monitoring outputs and auxiliary contacts							
G	Group outputs							

Monitoring

R	Feedback loop							
Q	Short circuit monitoring							
E	Earth fault monitoring							
M	Ground fault monitoring							

Devices

BSN	BMN	ISI	IMI	I3I	ILI	OSN	OTN	OT05N	K	Inputs		Outputs			Monit-		Comment		Page	
										E1	E2	SU	SV	M	G	R	Q	E	M	
●									4		2	3		6	●	●	●	●	●	16
	●								4		2	3		6	●	●	●	●	●	16
		●							4		2			2	●	●	●	●	●	17
		●							4		6			3		●	●	●	●	17
			●						4		3			3		●	●	●	●	17
				●					4		3			3		●	●	●	●	17
					●				4		3			3						17
						●			4			4				●				18
							●		4							●				18
								●	4		3		1			●				18
									4			4	1			●				19
									4			4	1			●				Fixed time 0.5 s
									4											19

Time-delayed output modules ESM-F-OT..

- ▶ Up to category 4 according to EN 954-1
- ▶ 4 redundant time-delayed safety contacts
- ▶ 1 semiconductor output
- Time delay adjustable between 1 s and 30 s or fixed time of 0.5 s optional
- ▶ LED status and diagnostic indicators



Function

The output modules ESM-F-OT... are operated via the base unit. The output modules can be used to switch power components such as contactors, motors, etc. directly or with a time-delay.

Depending on the version they have:

- ▶ Four NO contacts (each redundant and fault monitored) with adjustable or fixed time-delay
- ▶ LED indicators for device status as well as the state of the inputs and outputs
- ▶ Feedback loop for contacts connected after the outputs

Monitoring outputs

The On state of the related monitoring output corresponds to the following signal:

- ▶ 017: switch state of the safety contacts

Time-delayed output modules ESM-F-OT..

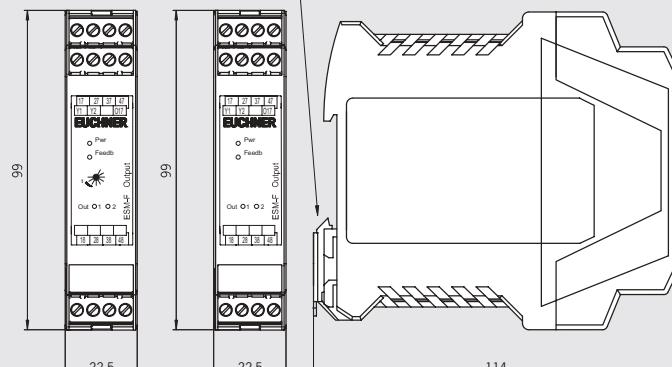


STOP
1
Cat.
4

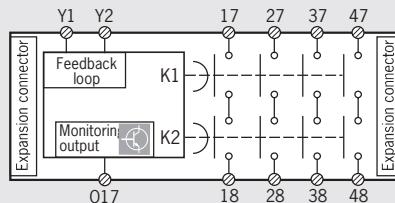
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Dimension drawing

Suitable for 35 mm DIN rail according to DIN EN 50022-35



Block diagram



Technical data outputs

Parameter	Value		
Minimum switching current at 24 V DC	20 mA		
Maximum switching voltage	DC 50 V / AC 250 V		
Utilization category *	U_e	I_e	ΣI_e
according to EN 60947-5-1	AC-12	250 V	8 A
	AC-15	250 V	3 A
	DC-12	50 V	8 A
	DC-13	24 V	3 A
U_e = Switching voltage			
I_e = Maximum switching current per contact			
ΣI_e = Maximum switching current for all safety contacts (cumulative current)			
* See page 29 for information about the utilization category			

Important: one connection set must be ordered for each output module (see page 20).

Ordering table

Series	Version	Outputs	24 V DC
ESM-F	OTN Time-delayed output module	04 4 NO, time-delayed, adjustable	095 126 ESM-F-OTN-04
	OT05N Time-delayed output module	04 4 NO, time-delayed 0.5 s, fixed	095 917 ESM-F-OT05N-04

1) BG approval pending

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.