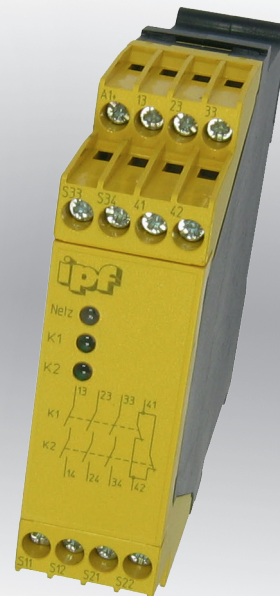
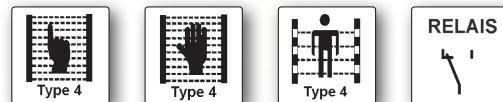


dimensions **22.5x114.5x99.0mm**

- ✓ **dual channel monitoring**
- ✓ **compact dimensions**
- ✓ **easy mounting on DIN-rail and connection with screw terminals**



**safety category up to type 4
'automatic / monitored start'**



description

The **AO000299** safety relay is intended for use with electro-sensitive protective equipment (ESPE). It ensures the safe, trouble-free connection of the safety light curtain to the cutoff current circuits within machines and system parts.

The safety relay has the following operational modes: 'automatic start' and 'monitored start'.

Quick start up is ensured thanks to the simple connection and installation system.

This device works without the need for servicing and offers the

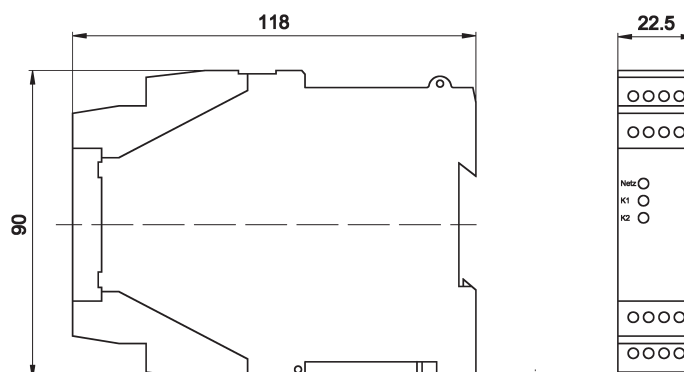
user optimum protection in all industrial safety applications.

application examples

- ▶ dual channel danger point safeguarding through hand and finger protection light curtain
- ▶ dual channel access guarding through a body protection light curtain
- ▶ construction of emergency-stop circuits

article-no.

AO000299

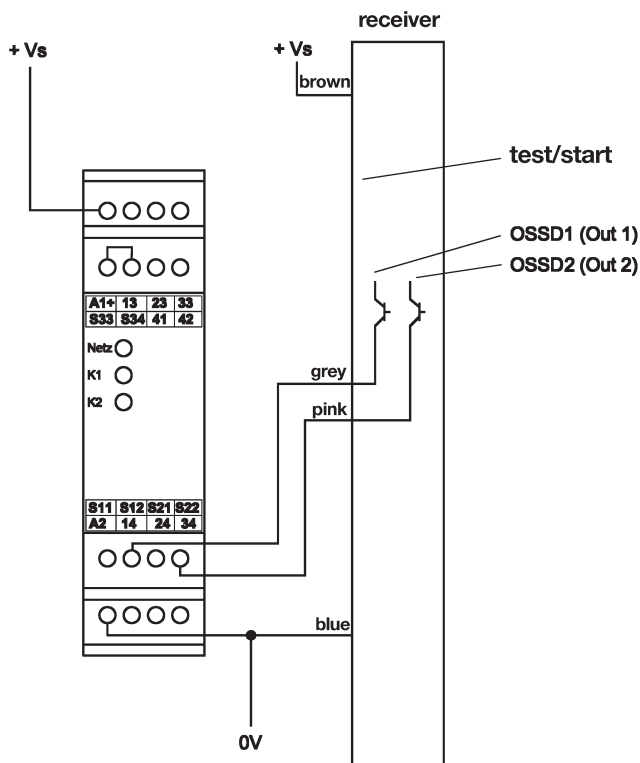


TECHNICAL DATA

safety category	up to type 4	
channels	2	
fitting light curtains	e.g. OY35	
operating voltage	24V DC	
power consumption	1.7W	
inrush current (S12,S22)	35mA	
continuous current (S12,S22)	20mA	
switching contact equipment	3 normally open (relay, positively driven), 1 normally closed (nc)	
switching voltage	250V AC / 24V DC	
switching current	4A	
switching contact fuse (quick acting/time lag)	6.3A / 4A	
switching capacity (ohmic load)	max. 1500VA	
operating cycle (mechanic/electric)	> 1.5 * 10 ⁵ / > 20 * 10 ⁶	
decay time	< 20ms	
voltage at connection terminal S11	24V DC (do not connect additional consumers)	
short-circuit protection	-	
reverse polarity protection	-	
dimensions	22.5x118x90mm	
housing material	thermoplast	
line characteristics (input circuit with 2x1.5mm ²)	max. 100m (per line), min. 150nF/km, min. 11.7Ohm/km, at 2x1.5mm ² and 25°C	
shock resistance (VDE 0160)	5g, 33Hz	
operating temperature	-15 ... +55°C	
degree of protection (EN 60529)	IP40 (housing) / IP20 (terminals)	
conductor connection (max.)	1x2.5mm ² / 1x4.0mm ² (strand with sleeve / massive conductor)	
mounting accessories	spring lock for DIN-rail (integrated)	
certificates	certified according to:	EN ISO 13849-1
	reached level / category	performance level e, Kat.4
	MTTFd (years)	584.5
	DC	99%
	CCF	fulfilled

connection example

automatic start



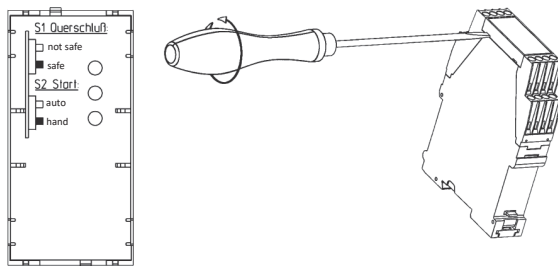
2-channel control through light barrier with self-test acc. to EN 61 496-1.
cross-circuit detection through light barrier.

Please observe note „Device programming“!

Switch settings:

- S1: With symmetric outputs of the light barrier, set switch S1 to „not cross-circuit proof“.
- With asymmetric outputs of the light barrier, set switch S1 to „cross-connection proof“.
- S2: Auto

device setup



S1 may only be actuated while the device is in a de-energized state!
The switch position shows the state on delivery.

notes

For detailed connection information, please read the instructions enclosed.

It is essential that you observe the maximum line length (100m) between the relay and the ESPE (electro-sensitive protective equipment).
ipf safety light curtains have a switchover function between automatic start and monitored start. If the ‚manual reset‘ function of the safety light curtain is used, the **AO000299** safety relay has to be connected in the same way as in the operational mode ‚automatic start. In connection with this, release takes place via an external restart button which is located directly on the safety light curtain.
The protection of persons and objects in the form of a warranty no longer applies if the safety relay and connected components are not correspondingly used as specified.

This data sheet as well as your personal contact can be found at www.ipf-electronic.com

NOTES

A large grid area for taking notes, consisting of a 30x30 grid of small squares. The grid is empty and occupies the majority of the page's central area.