

high performance
through-beam sensors > > >

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optical sensor, amplifier

PRODUCT: round devices: plastic
 devices with thread: brass
for connection to amplifier

DESIGN:

| | | |
|----|-----------------------|--------------|
| 54 | amplifier | 100x75x110 |
| 58 | amplifier | 40x76.5x78.5 |
| 59 | amplifier | 149x75x110 |
| 10 | transmitter, receiver | Ø 10mm |
| 12 | transmitter, receiver | M12x1 |
| 13 | transmitter, receiver | 12x12 |

Sensor

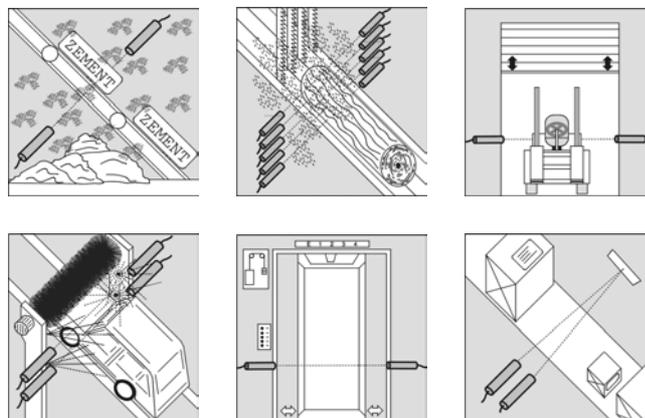
- plastic housing (design 10)
- metal housing brass, nickel-plated or stainless steel (design 12)
- connection to amplifier
- devices with thread to EURONORM
- large sensing range

Amplifier

- up to 35m operating distance
- relay or transistor output
- alignment assistance using test function
- teach-in input
- test input to turn off the transmitter
- alarm output to soiling display
- 2-way selectable transmitter frequency
- 0 to 15s turn-on and turn-off delay
- 4-way selectable basic transmitting power
- selectable light-on / dark-on switching function
- automatic self-test
- plug-in base connection
- 2 year warranty!
- delivery in storage box

Function

The high-performance through-beam sensor systems have been engineered specifically for applications where conventional light barriers have reached their limits. They excel in their extreme insensitivity to soiling and in their sensing range and are ideally suited to difficult applications, where up till now only compromise solutions have existed. Thanks to the high performance of the systems, significant penetration is ensured even under conditions of heavy soiling. Chips, dust, flour, oil or dirty water no longer present any obstacle. They are thus perfectly suited for applications in the wood and paper industry, for car-washes, for the control of bulk materials, in elevators, for door controls out in the open, in the food processing industry, etc.



Each system comprises one sensor, one receiver and one amplifier. The transmitters and receivers, in various very compact rugged designs, can be accommodated in any construction.

Their large angle of beam spread facilitates their alignment with each other even for sensing ranges of 35m. At the same time they are insensitive to vibration, shock and a resulting loss of alignment.

The high level of user-friendliness is underlined by the ease of installation of the amplifier and sensors as well as by the uncomplicated operation of the devices.

The amplifiers operate with modulated infrared light that provides high external light shielding. The circuit has been laid out in a way that signals with the correct frequency and phase position will be the only ones recognised. This excludes any interference from other light barriers to the greatest extent. For applications where several light barriers of the same type are to be operated side by side there are versions with adjustable transmitting frequency. In addition to amplifiers with manual setting of the transmitting power, we also offer processor-controlled versions with automatic control.

alarm display

The red alarm display is permanently lit while the light passing stays uninterrupted and when the intensity display has been turned off for a few seconds. With automatic amplifiers it is turned on, if the transmitting power is at least 95% of the maximum transmitting power.

alarm output

A signal is transmitted before the output limit is reached. The red LED lights up on the amplifier at the same time. The system nevertheless continues to be fully functional.

analogue output

The analogue output helps with the alignment of the sensors and provides a voltage of 0-10V DC, which is proportional to the signal received.

turn-off delay

The turn-off delay is the period between release (light-on mode) or interruption (dark-on mode) of the infrared beam and the switching over of the switching output.

automatic mode

The amplifiers automatically adapt the transmitting power to the prevailing environmental conditions, permanently compensating 100% for any effects on the system resulting from interference. The switching point is constant over the full power band width and reproducible.

turn-on delay

The turn-on delay is the time period between interruption (light-on mode) or release (dark-on mode) of the infrared beam and the switching over of the switching output.

basic transmitting power

The devices have pre-set output ranges.

intensity display

The green intensity display is permanently lit whenever the transmitting power is sufficient. If the display flashes or goes out completely, then either the transmitting power has been set too low, the transmitter and/or receiver lenses are too soiled for the set transmitting power, the distance between transmitter and receiver is too great or the transmitter and receiver have been incorrectly adjusted out of tolerance.

manual operation

Using the control the user can set the transmitting power to the desired degree. Any change of the environmental conditions requires a readjustment.

permanent sensor monitoring

This device signals any sensor error cropping up during the operation (short circuit or interruption) by the lighting up of LEDs with specification of the error and sensor type. On some versions an additional error output will become active.

control system display

The green control system display is permanently lit while the automatic transmitting setting is active. Whenever it goes out the control has been stopped.

relay output

The relay output (change-over contact) comes in a floating version.

switching function

The switching function describes the behaviour of the switching output during an interruption of the infrared beam. In the dark-on mode "dark" an output signal is generated if the light beam is interrupted. In the light-on mode "light" no output signal is generated if the light beam is interrupted.

switching status display

The yellow switching status display lights up when the switching output is active.

transmitting frequency

The transmitting frequency is that frequency with which the light of the transmitter has been clocked.

transmitting and receiving connections

All transmitter and receiver connections of the amplifiers have short circuit protection. Even in case of an unintentional short circuit it is impossible to damage the device.

teach function

The teach function allows the user a programming of the switching output turn-off point. The object to be recognised must be placed between the sensors and the teach-in function is activated by pressing the button. The amplifier sets the switch-point in a way that the object is recognised. A transparent object, however, will not be recognised.

test input

To test the functionality of the system, it is possible for example to switch off the transmitter using a PLC, in order to test if a status change is taking place on the relay or on the transistor output of this amplifier.

test function

Some of the automatic devices have a sensor monitoring function included to recognise functional errors or defects on the sensors. These can be activated by pushing the button of a test function. The amplifier signals the user whether or not an error is present with the transmitter or the receiver. For any non-existence of an error the test function will display the quality of the path. An LED has been provided for the display, which can flash 1 to 10 times with the flashing being proportional to the signal that is received.

transistor output

These outputs can be used as NPN output or PNP output depending on the external switching.

▶ 1 channel amplifier, relay output

- up to 35m operating distance
- sensitivity adjustable with rotary knob
- relay output

status: yellow LED — OUTPUT/RELAY-STATUS
intensity: green LED — GAIN-CONTROL

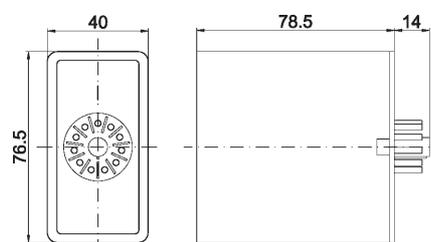
sensitivity setting —
power ON: green LED — ON GAIN-SETTING



Technical data and list of articles

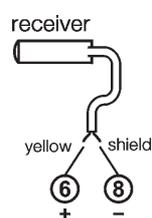
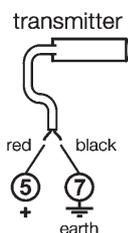
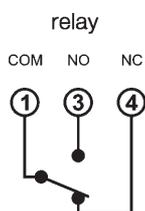
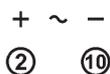
| | |
|--|--|
| 24V DC / $\pm 20\%$ / 1.9W | OV580980 |
| 230V AC / $\pm 10\%$ / 3.8VA | OV584980 |
| relay output | 1 change-over contact: 5A / 230V AC (24V DC) |
| sampling frequency | 18Hz |
| alarm output | - |
| measuring system | pulsed IR-light: 3.5kHz |
| transmitting power | - |
| operating distance | up to 35m depending on type of sensor |
| basic transmitting power | 100% |
| teach input | - |
| turn-on / turn-off delay | - |
| switching function | light-on |
| test input | - |
| housing material | plastic |
| system of protection | IP40 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | 11pin plug-in base |
| transmitter and receiver / accessories | see pages 24 to 26 |

dimensional drawing

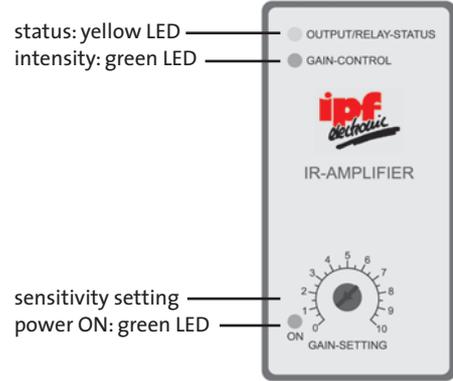


connection

operating voltage



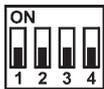
- up to 35m operating distance
- sensitivity adjustable with rotary knob
- relay output
- pnp / npn transistor output
- test input
- 4-way selectable transmitting frequency
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function



Technical data and list of articles

| | |
|--|--|
| 24V DC / ±20% / 2.0W | OV580900 |
| 230V AC / ±10% / 4.2VA | OV584900 |
| relay output | 1 change-over contact: 5A / 230V AC (24V DC) |
| sampling frequency | 18Hz |
| transistor output AC device | nnp: 0.1A (30V DC) / pnp: 5mA (12V DC) |
| transistor output DC device | nnp / pnp: 0.1A (30V DC) |
| sampling frequency | 30Hz |
| alarm output | - |
| measuring system | pulsed IR-light: 3.5 / 3.8 / 4.0 / 4.4kHz |
| transmitting power | - |
| operating distance | up to 35m depending on type of sensor |
| basic transmitting power | 20% / 100% |
| teach input | - |
| turn-on / turn-off delay | - |
| switching function | light-on / dark-on |
| test input | 24V DC |
| housing material | plastic |
| system of protection | IP40 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | 11pin plug-in base |
| transmitter and receiver / accessories | see pages 24 to 26 |

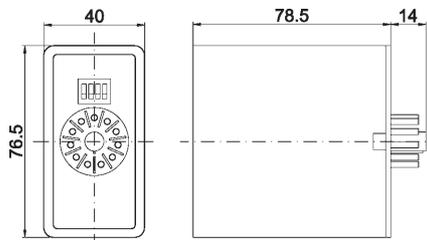
DIP switch position



| 1 | | 2 | | 3 | | 4 | |
|--------------------------|-----|--------------------|-----|------------------------|-----|-----|--|
| basic transmitting power | | switching function | | transmitting frequency | | | |
| 20 % | ON | dark | ON | 3.5 kHz | ON | ON | |
| | | | | 3.8 kHz | ON | OFF | |
| 100 % | OFF | light | OFF | 4.0 kHz | OFF | ON | |
| | | | | 4.4 kHz | OFF | OFF | |

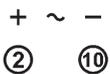
Manufacturer's setting: highlighted grey

dimensional drawing

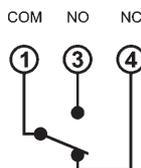


connection

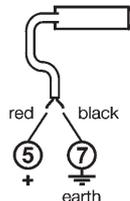
operating voltage



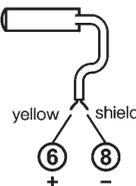
relay



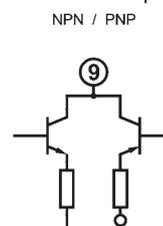
transmitter



receiver



transistor output

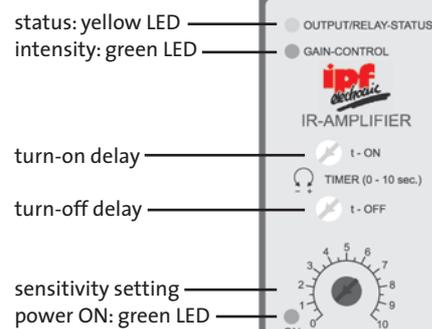


test input



▶ 1 channel amplifier, relay and transistor output, time delay

- up to 35m operating distance
- sensitivity adjustable with rotary knob
- relay output
- pnp / npn transistor output
- turn-on and turn-off delay
- test input
- 4-way selectable transmitting frequency
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function



Technical data and list of articles

| | |
|--|--|
| 24V DC / ±20% / 2.0W | OV580905 |
| 230V AC / ±10% / 4.2VA | OV584905 |
| relay output | 1 change-over contact: 5A / 230V AC (24V DC) |
| sampling frequency | 12Hz |
| transistor output AC device | npn: 0.1A (30V DC) / pnp: 5mA (12V DC) |
| transistor output DC device | npn / pnp: 0.1A (30V DC) |
| sampling frequency | 20Hz |
| alarm output | - |
| measuring system | pulsed IR-light: 3,5 / 3,8 / 4,0 / 4,4kHz |
| transmitting power | - |
| operating distance | up to 35m depending on type of sensor |
| basic transmitting power | 20% / 100% |
| teach input | - |
| turn-on / turn-off delay | 0 to 10s |
| switching function | light-on / dark-on |
| test input | 24V DC |
| housing material | plastic |
| system of protection | IP40 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | 11pin plug-in base |
| transmitter and receiver / accessories | see pages 24 to 26 |

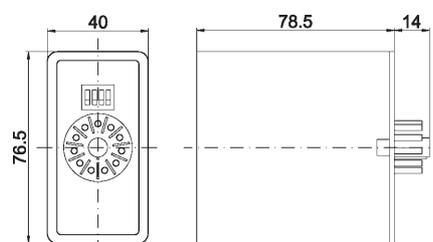
DIP switch position



| 1 | | 2 | | 3 | | | 4 |
|--------------------------|-----|--------------------|-----|------------------------|-----|-----|---|
| basic transmitting power | | switching function | | transmitting frequency | | | |
| 20 % | ON | dark | ON | 3.5 kHz | ON | ON | |
| | | | | 3.8 kHz | ON | OFF | |
| 100 % | OFF | light | OFF | 4.0 kHz | OFF | ON | |
| | | | | 4.4 kHz | OFF | OFF | |

Manufacturer's setting: highlighted grey

dimensional drawing

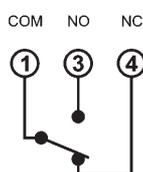


connection

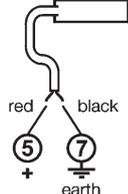
operating voltage



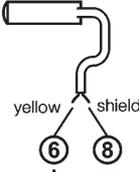
relay



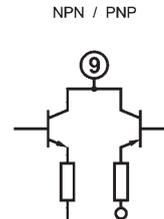
transmitter



receiver



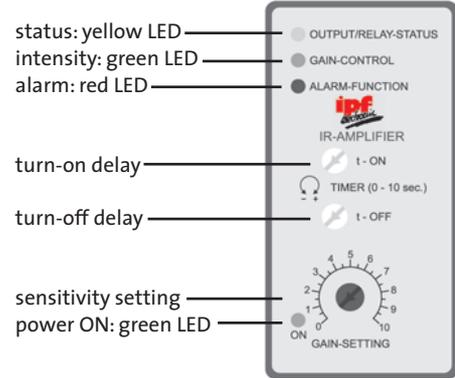
transistor output



test input



- up to 35m operating distance
- sensitivity adjustable with rotary knob
- relay output
- pnp / npn transistor output
- turn-on and turn-off delay
- alarm output to soiling display
- 4-way selectable transmitting frequency
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function



Technical data and list of articles

| | |
|--|--|
| 24V DC / ±20% / 2.0W | OV580907 |
| relay output | 1 change-over contact: 5A / 230V AC (24V DC) |
| sampling frequency | 12Hz |
| transistor output AC device | npn: 0.1A (30V DC) / pnp: 5mA (12V DC) |
| transistor output DC device | npn / pnp: 0.1A (30V DC) |
| sampling frequency | 20Hz |
| alarm output AC device | npn: 0.1A (30V DC) / pnp: 5mA (12V DC) |
| alarm output DC device | npn / pnp: 0.1A (30V DC) |
| measuring system | pulsed IR-light: 3.5 / 3.8 / 4.0 / 4.4kHz |
| transmitting power | - |
| operating distance | up to 35m depending on type of sensor |
| basic transmitting power | 20% / 100% |
| teach input | - |
| turn-on / turn-off delay | 0 to 10s |
| switching function | light-on / dark-on |
| test input | - |
| housing material | plastic |
| system of protection | IP40 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | 11pin plug-in base |
| transmitter and receiver / accessories | see pages 24 to 26 |

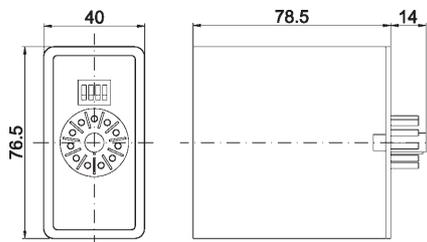
DIP switch position



| 1 | | 2 | | 3 | | 4 | |
|--------------------------|-----|--------------------|-----|------------------------|-----|-----|--|
| basic transmitting power | | switching function | | transmitting frequency | | | |
| 20 % | ON | dark | ON | 3.5 kHz | ON | ON | |
| | | | | 3.8 kHz | ON | OFF | |
| 100 % | OFF | light | OFF | 4.0 kHz | OFF | ON | |
| | | | | 4.4 kHz | OFF | OFF | |

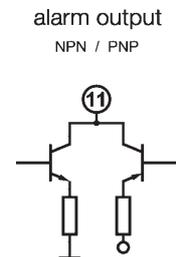
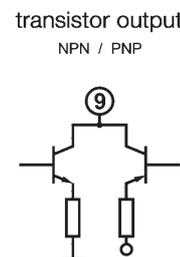
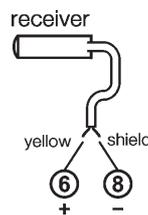
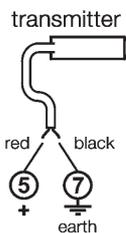
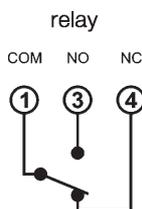
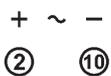
Manufacturer's setting: highlighted grey

dimensional drawing



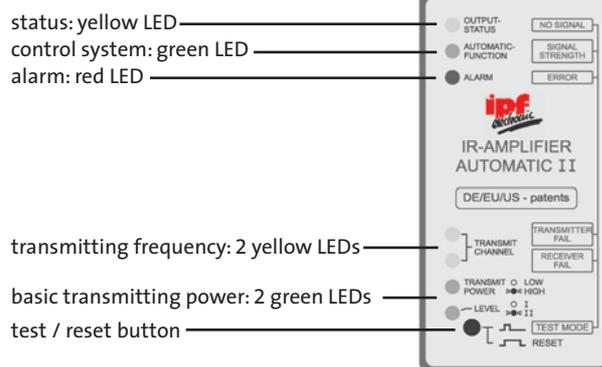
connection

operating voltage



1 channel automatic amplifier, relay, transistor and alarm output

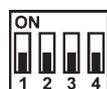
- up to 25m operating distance
- npn / pnp transistor switching output
- relay output
- alignment assistance using test function
- test input to turn off the transmitter
- alarm output to soiling display
- 2-way selectable transmitting frequency
- 4-way selectable basic transmitting power
- selectable light-on / dark-on switching function
- automatic self-test



Technical data and list of articles

| | | |
|--|---|-----------------|
| 24V DC / ±20% / 2.2W | OV580510 | OV580910 |
| 230V AC / ±10% / 4.8VA | OV584510 | OV584910 |
| transistor output | npn/pnp, max. 30V DC / 100mA | |
| sampling frequency | Low: 20Hz / High: 11Hz | |
| relay output | 1 change-over contact : 5A / 230V AC (24V DC) | |
| sampling frequency | Low: 20Hz / High: 11Hz | |
| alarm output | pnp, 24V DC / DC:100mA, AC: 5mA | |
| measuring system | pulsed IR-light: 3.7kHz / 4.1kHz selectable | |
| transmitting power | automatic setting | |
| operating distance | up to 25m depending on type of sensor | |
| basic transmitting power | Low 1 / Low 2 / High 1 / High 2 | |
| teach input | - | |
| turn-on / turn-off delay | - | |
| switching function | selectable (no / nc) light-on / dark-on | |
| test input | 0 to 30V DC | |
| housing material | plastic | |
| system of protection | IP40 to EN 60529 | |
| ambient temperature | -25°C to +50°C | |
| connection | 11pin plug-in base | |
| transmitter and receiver / accessories | see pages 24 to 26 | |

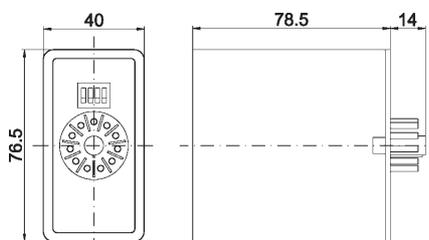
DIP switch position



| | 1 | 2 | 3 | 4 |
|--------------------------|-----|-----|-------|---------|
| basic transmitting power | | | | |
| High 2 | ON | ON | dark | ON |
| High 1 | ON | OFF | | 4,1 kHz |
| Low 2 | OFF | ON | light | OFF |
| Low 1 | OFF | OFF | | 3,7 kHz |

Manufacturer's setting: highlighted grey

dimensional drawing

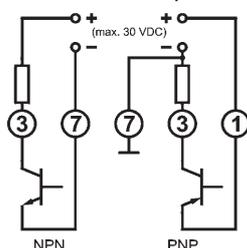


connection

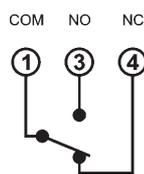
operating voltage



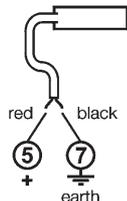
transistor output



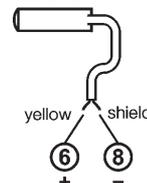
relay



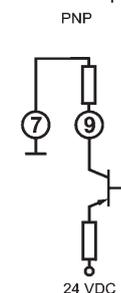
transmitter



receiver

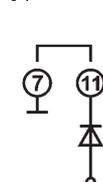


alarm output

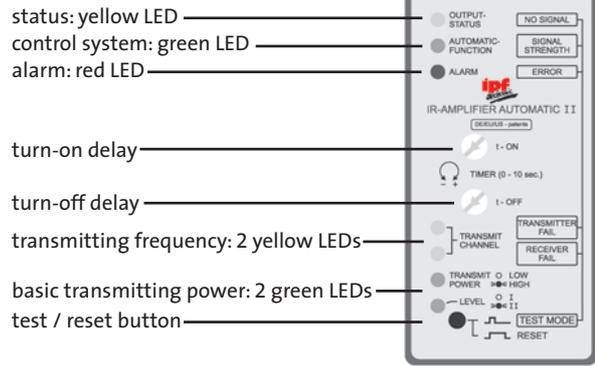


test input

open = inactive
0 V = active



- up to 25m operating distance
- npn / pnp transistor switching output
- relay output
- alignment assistance using test function
- turn-on and turn-off delay
- test input to turn off the transmitter
- alarm output to soiling display
- 2-way selectable transmitting frequency
- 4-way selectable basic transmitting power
- selectable light-on / dark-on switching function
- automatic self-test



Technical data and list of articles

| | | |
|--|--|-----------------|
| 24V DC / ±20% / 2.2W | OV580515 | OV580915 |
| 230V AC / ±10% / 4.8VA | OV584515 | OV584915 |
| transistor output | npn/pnp, max. 30V DC / 100mA | |
| sampling frequency | Low: 20Hz / High: 11Hz | |
| relay output | 1 change-over contact: 5A / 230V AC (24V DC) | |
| sampling frequency | Low: 20Hz / High: 11Hz | |
| alarm output | pnp, 24V DC / DC: 100mA, AC: 5mA | |
| measuring system | pulsed IR-light: 3.7kHz / 4.1kHz selectable | |
| transmitting power | automatic setting | |
| operating distance | up to 25m depending on type of sensor | |
| basic transmitting power | Low 1 / Low 2 / High 1 / High 2 | |
| teach input | - | |
| turn-on / turn-off delay | 0 to 10s | |
| switching function | selectable (no / nc) light-on / dark-on | |
| test input | 0 to 30V DC | |
| housing material | plastic | |
| system of protection | IP40 to EN 60529 | |
| ambient temperature | -25°C to +50°C | |
| connection | 11pin plug-in base | |
| transmitter and receiver / accessories | see pages 24 to 26 | |

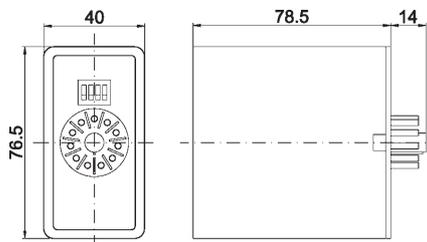
DIP switch position



| | 1 | 2 | 3 | 4 |
|--------------------------|-----|-----|-------|---------|
| basic transmitting power | ON | ON | dark | ON |
| High 2 | ON | ON | ON | 4,1 kHz |
| High 1 | ON | OFF | OFF | ON |
| Low 2 | OFF | ON | light | OFF |
| Low 1 | OFF | OFF | OFF | 3,7 kHz |

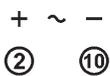
Manufacturer's setting: highlighted grey

dimensional drawing

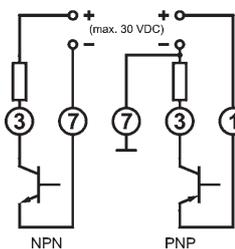


connection

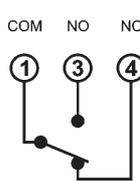
operating voltage



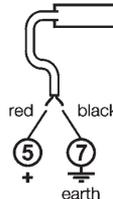
transistor output



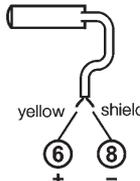
relay



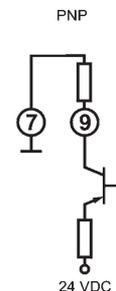
transmitter



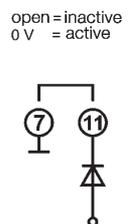
receiver



alarm output

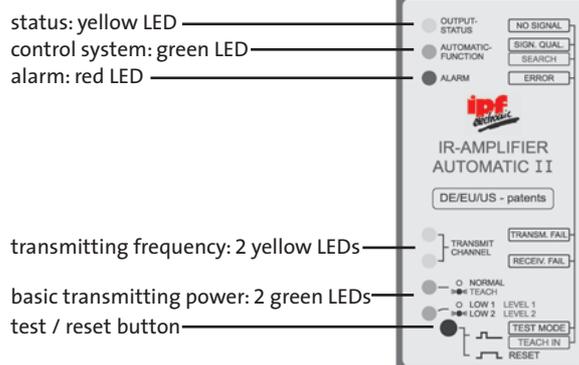


test input



1 channel automatic amplifier, relay, transistor and alarm output, teach-in

- up to 25m operating distance
- npn / pnp transistor switching output
- relay output
- alignment assistance using test function
- teach-In
- test input to turn off the transmitter
- alarm output to soiling display
- 2-way selectable transmitting frequency
- 2-way selectable basic transmitting power
- selectable light-on / dark-on switching function
- automatic self-test



Technical data and list of articles

| | | |
|--|--|-----------------|
| 24V DC / ±20% / 2.2W | OV580530 | OV580930 |
| 230V AC / ±10% / 4.8VA | OV584530 | OV584930 |
| transistor output | npn/pnp, max. 30V DC / 100mA | |
| sampling frequency | 20Hz | |
| relay output | 1 change-over contact: 5A / 230V AC (24V DC) | |
| sampling frequency | 20Hz | |
| alarm output | pnp, 24V DC / DC:100mA, AC: 5mA | |
| measuring system | pulsed IR-light: 3.7kHz / 4.1kHz selectable | |
| transmitting power | automatic setting | |
| operating distance | up to 25m depending on type of sensor | |
| basic transmitting power | Low 1 / Low 2 | |
| teach input | Level 1 / Level 2 | |
| turn-on / turn-off delay | - | |
| switching function | selectable (no / nc) light-on / dark-on | |
| test input | 0 to 30V DC | |
| housing material | plastic | |
| system of protection | IP40 to EN 60529 | |
| ambient temperature | -25°C to +50°C | |
| connection | 11pin plug-in base | |
| transmitter and receiver / accessories | see pages 24 to 26 | |

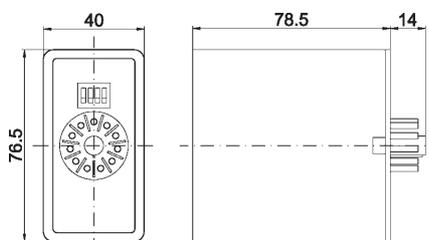
DIP switch position



| | 1 | 2 | 3 | | 4 | |
|---------|----------------|-----|--------------------|-----|-------------------|-----|
| | operation mode | | switching function | | transm. frequency | |
| Teach 2 | ON | ON | dark | ON | 4,1 kHz | ON |
| Teach 1 | ON | OFF | | OFF | 3,7 kHz | OFF |
| Low 2 | OFF | ON | light | OFF | 3,7 kHz | OFF |
| Low 1 | OFF | OFF | | ON | 4,1 kHz | ON |

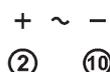
Manufacturer's setting: highlighted grey

dimensional drawing

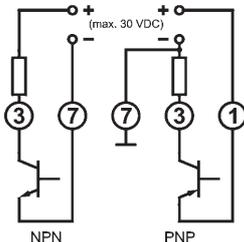


connection

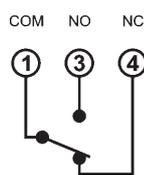
operating voltage



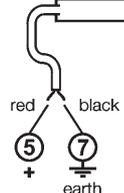
transistor output



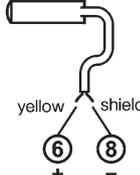
relay



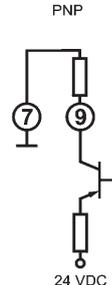
transmitter



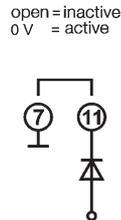
receiver



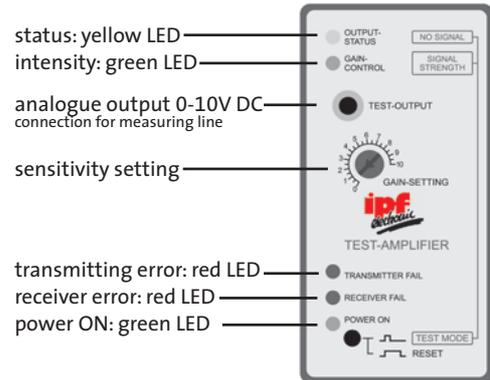
alarm output



test input



- sensor alignment and test function via 0 to 10V DC analogue output (connection of a measuring device)
- up to 35m operating distance
- relay output
- pnp / npn transistor output
- test input
- sensitivity adjustable with rotary knob
- 2-way selectable transmitting frequency
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on mode



Technical data and list of articles

| | |
|--|---|
| 24V DC / +20% / 2.0W | OV580080 |
| 230V AC / +10% / 4.2VA | OV584080 |
| relay output | 1 change-over contact / 5A / 230V AC (24V DC) |
| sampling frequency | 18Hz |
| transistor output AC device | nnp: 0.1A (30VDC), pnp: 5mA (12V DC) |
| transistor output DC device | nnp / pnp: 0.1A (30V DC) |
| sampling frequency | 30Hz |
| analogue output | 0 to 10 / 10 to 0V DC |
| alarm output | - |
| measuring system | pulsed IR-light: 3.5 / 4.4kHz selectable |
| transmitting power | - |
| operating distance | up to 35m depending on type of sensor |
| basic transmitting power | 20% / 100% |
| teach input | - |
| turn-on / turn-off delay | - |
| switching function | light-on / dark-on |
| test input | 24V DC |
| housing material | plastic |
| system of protection | IP40 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| transmitter and receiver / accessories | see pages 24 to 26 |

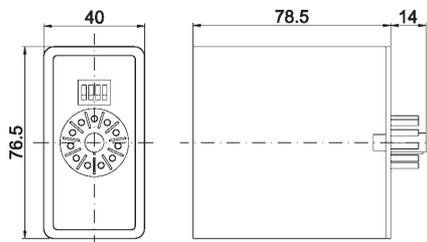
DIP switch position



| | 1 | 2 | 3 | 4 |
|--------------------------|--------|-----|--------|-----|
| basic transmitting power | 20% | ON | dark | ON |
| switching function | 100% | OFF | light | OFF |
| output voltage | 10-0V | ON | 0-10V | OFF |
| transmitting frequency | 3,5kHz | ON | 4,4kHz | OFF |

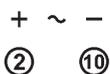
Manufacturer's setting: highlighted grey

dimensional drawing

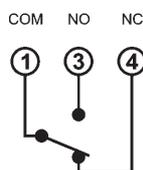


connection

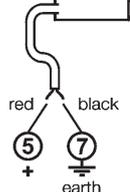
operating voltage



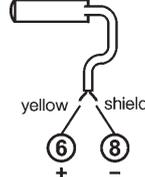
relay



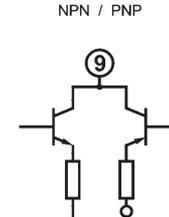
transmitter



receiver



transistor output



test input



▶ list of 1 channel amplifiers

PRODUCT: amplifier, design 58

| article-no. | design | description | comment | housing | voltage | output | connection | fig. |
|-------------|--------------|-------------|-------------------------|---------|---------|--------------------|--------------------|------|
| OV580980 | 40x76.5x78.5 | amplifier | low cost | plastic | 24V DC | relay | plug-in base 11pin | 1 |
| OV584980 | 40x76.5x78.5 | amplifier | low cost | plastic | 230V AC | relay | plug-in base 11pin | 1 |
| OV580900 | 40x76.5x78.5 | amplifier | standard | plastic | 24V DC | relay, pnp/npn | plug-in base 11pin | 2 |
| OV584900 | 40x76.5x78.5 | amplifier | standard | plastic | 230V AC | relay, pnp/npn | plug-in base 11pin | 2 |
| OV580905 | 40x76.5x78.5 | amplifier | standard, time 0-10s | plastic | 24V DC | relay, pnp/npn | plug-in base 11pin | 2 |
| OV584905 | 40x76.5x78.5 | amplifier | standard, time 0-10s | plastic | 230V AC | relay, pnp/npn | plug-in base 11pin | 2 |
| OV580907 | 40x76.5x78.5 | amplifier | standard, time 0-10s | plastic | 24V DC | relay, pnp/npn | plug-in base 11pin | 2 |
| OV580510 | 40x76.5x78.5 | amplifier | autom control | plastic | 24V DC | pnp/npn, alarm | plug-in base 11pin | 2 |
| OV580910 | 40x76.5x78.5 | amplifier | autom control | plastic | 24V DC | relay, alarm | plug-in base 11pin | 2 |
| OV584510 | 40x76.5x78.5 | amplifier | autom control | plastic | 230V AC | pnp/npn, alarm | plug-in base 11pin | 2 |
| OV584910 | 40x76.5x78.5 | amplifier | autom control | plastic | 230V AC | relay, alarm | plug-in base 11pin | 2 |
| OV580515 | 40x76.5x78.5 | amplifier | autom control,time0-10s | plastic | 24V DC | pnp/npn, alarm | plug-in base 11pin | 2 |
| OV580915 | 40x76.5x78.5 | amplifier | autom control,time0-10s | plastic | 24V DC | relay, alarm | plug-in base 11pin | 2 |
| OV584515 | 40x76.5x78.5 | amplifier | autom control,time0-10s | plastic | 230V AC | pnp/npn, alarm | plug-in base 11pin | 2 |
| OV584915 | 40x76.5x78.5 | amplifier | autom control,time0-10s | plastic | 230V AC | relay, alarm | plug-in base 11pin | 2 |
| OV580530 | 40x76.5x78.5 | amplifier | autom control,teach-in | plastic | 24V DC | pnp/npn, alarm | plug-in base 11pin | 2 |
| OV580930 | 40x76.5x78.5 | amplifier | autom control,teach-in | plastic | 24V DC | relay, alarm | plug-in base 11pin | 2 |
| OV584530 | 40x76.5x78.5 | amplifier | autom control,teach-in | plastic | 230V AC | pnp/npn, alarm | plug-in base 11pin | 2 |
| OV584930 | 40x76.5x78.5 | amplifier | autom control,teach-in | plastic | 230V AC | relay, alarm | plug-in base 11pin | 2 |
| OV580080 | 40x76.5x78.5 | amplifier | test, ow as standard | plastic | 24V DC | analogue, 0-10V DC | plug-in base 11pin | 2 |
| OV584080 | 40x76.5x78.5 | amplifier | test, ow as standard | plastic | 230V AC | analogue, 0-10V DC | plug-in base 11pin | 2 |

fig. 1

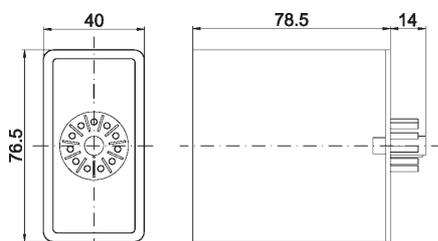
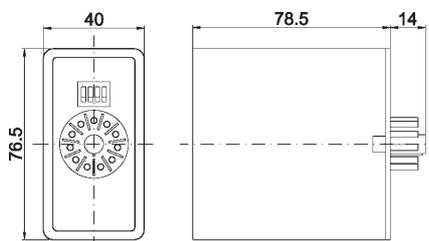


fig. 2



The multiplexers of the OV series operate, as the name already suggests, in multiplex mode. The connected light barriers are addressed one after the other in such a way that they do not mutually influence each other. In both the 4 and 8 channel versions it is even possible to increase their number by connecting them in series. As before, some of the devices are processor-controlled and operate with modulated infrared light, which provides high external light shielding. The switching operation has been laid out in such a way that only signals of the correct frequency and phase position are recognised.

alarm display

see alarm output

alarm output "alarm"

Prior to reaching the output limit a signal is emitted. At the same time, a red LED lights up on the amplifier. The system nevertheless continues to be fully functional.

turn-off delay

The turn-off delay is the period between release (light-on mode) or interruption (dark-on mode) of the infrared beam and the switching over of the switching output.

automatic mode

The automatic amplifiers represent a logical further development of the light barrier amplifiers. The amplifiers automatically adapt the transmitting power to the prevailing environmental conditions, permanently compensating 100% for any effects on the system resulting from interference. The switching point is constant over the full power band width and reproducible.

turn-on delay

The turn-on delay is the time period between interruption (light-on mode) or release (dark-on mode) of the infrared beam and the switching over of the switching output.

basic transmitting power

The devices have pre-set output ranges.

intensity display

The green intensity display is permanently lit whenever the transmitting power is sufficient. If the display flashes or goes out completely, then either the transmitting power has been set too low, the transmitter and/or receiver lenses are too soiled for the set transmitting power, the distance between transmitter and receiver is too great or the transmitter and receiver have been incorrectly adjusted out of tolerance.

light curtain

Only one relay or transistor output (channel 1) will react in the case that one of the light barriers is interrupted.

manual operation

Using potentiometers the user is able to set the transmitting power to the desired degree. Any change of environmental conditions requires a readjustment.

master-slave operation

The number of light barriers can be increased even further by connecting multiplexers in series.

control system display

The green control system display is permanently lit while the automatic transmitting setting is active. Whenever it goes out the control has been stopped.

relay output

The relay output, executed as a make contact or a change-over contact (depending on the type), comes in a floating version that reacts to any interruption of the light barrier.

switching function

The switching function describes the behaviour of the switching output in case of the infrared beam has been interrupted. In the dark-on mode "dark" an output signal is generated if the light beam is interrupted. In the light-on mode "light" no output signal is generated if the light beam is interrupted.

turn-on / turn-off delay

The turn-on delay or turn-off delay delays the reaction of the output by a time that is adjustable between 0...15s.

switching status display

The yellow switching status display lights up when the switching output is active.

transmitting frequency

The transmitting frequency is the frequency with which the amplifier transmits. Some versions can be operated with different frequencies.

transmitting and receiving connections

All transmitter and receiver connections of the amplifiers have short circuit protection. Even in case of an unintentional short circuit it is impossible to damage the device.

test function

The amplifier signals the user whether or not an error has cropped up on the transmitter or the receiver side. For any non-existence of an error the test function will display the quality of the passing. A LED has been provided for the display, which can flash 1 to 10 times with the flashing being proportional to the signal that is received.

transistor output

These outputs can be used as NPN output or PNP output depending on the external switching.

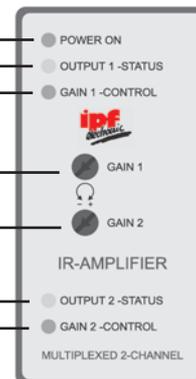
2 channel multiplexer, relay output

- up to 30m operating distance
- sensitivity adjustable with rotary knob for each channel
- 1 relay output for each channel
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function for each channel
- 16msec / 8msec selectable multiplex speed

power ON: green LED — POWER ON
 status channel 1: yellow LED — OUTPUT 1 -STATUS
 intensity channel 1: green LED — GAIN 1 -CONTROL

transmitting power channel 1 — GAIN 1
 transmitting power channel 2 — GAIN 2

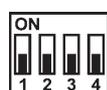
status channel 2: yellow LED — OUTPUT 2 -STATUS
 intensity channel 2: green LED — GAIN 2 -CONTROL



Technical data and list of articles

| | |
|--|--|
| 24V DC / ±20% / 2.0W | OV580920 |
| 230V AC / ±10% / 4.1VA | OV584920 |
| relay output | 2 x make contacts: 5A / 230V AC (24V DC) |
| sampling frequency | 20Hz |
| alarm output | - |
| measuring system | modulated IR-light, 4kHz |
| operating distance | up to 30m depending on type of sensor |
| multiplex speed | 16msec / 8msec |
| master-slave operation | - |
| light curtain function | - |
| basic transmitting power | 20% / 100% |
| turn-on / turn-off delay | - |
| switching function | light-on / dark-on |
| housing material | plastic |
| system of protection | IP40 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | 11pin plug-in base |
| transmitter and receiver / accessories | see pages 24 to 26 |

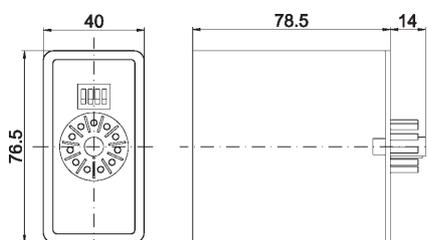
DIP switch position



| 1 | | 2 | | 3 | | 4 | |
|--------------------|-----|-----------|-----|--------------------------|-----|-----------------|----|
| switching function | | channel 2 | | basic transmitting power | | multiplex speed | |
| dark | ON | dark | ON | 100% | ON | 16 ms | ON |
| light | OFF | light | OFF | 20% | OFF | 8 ms | ON |

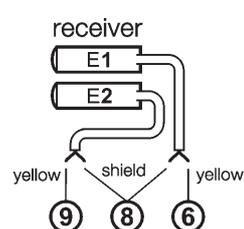
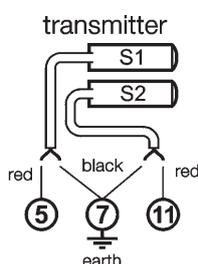
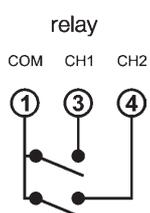
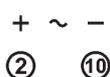
Manufacturer's setting: highlighted grey

dimensional drawing

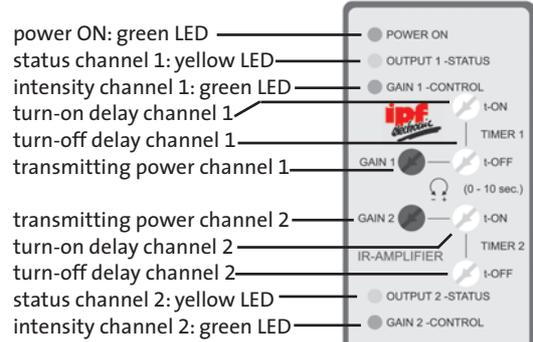


connection

operating voltage



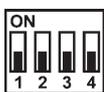
- up to 30m operating distance
- sensitivity adjustable with rotary knob for each channel
- 1 relay output for each channel
- turn-on and turn-off delay adjustable for each channel
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function for each channel
- 16msec / 8msec selectable multiplex speed



Technical data and list of articles

| | |
|--|--|
| 24V DC / ±20% / 2.0W | OV580925 |
| 230V AC / ±10% / 4.1VA | OV584925 |
| relay output | 2 x make contacts: 5A / 230V AC (24V DC) |
| sampling frequency | 20Hz |
| alarm output | - |
| measuring system | modulated IR-light, 4kHz |
| operating distance | up to 30m depending on type of sensor |
| multiplex speed | 16msec / 8msec |
| master-slave operation | - |
| light curtain function | - |
| basic transmitting power | 20% / 100% |
| turn-on / turn-off delay | 0 to 15sec |
| switching function | light-on / dark-on |
| housing material | plastic |
| system of protection | IP40 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | 11pin plug-in base |
| transmitter and receiver / accessories | see pages 24 to 26 |

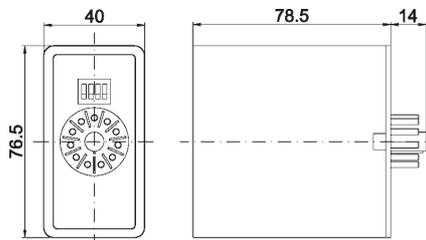
DIP switch position



| 1 | | 2 | | 3 | | 4 | |
|------------------------------|-----|------------------------------|-----|--------------------------|-----|-----------------|----|
| switching function channel 1 | | switching function channel 2 | | basic transmitting power | | multiplex speed | |
| dark | ON | dark | ON | 100% | ON | 16 ms | ON |
| light | OFF | light | OFF | 20% | OFF | 8 ms | ON |

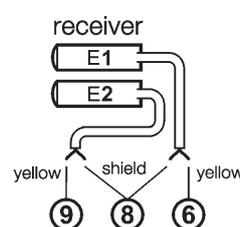
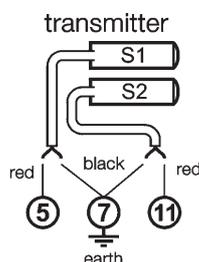
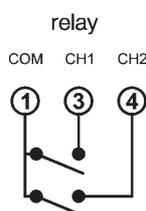
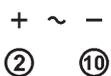
Manufacturer's setting: highlighted grey

dimensional drawing



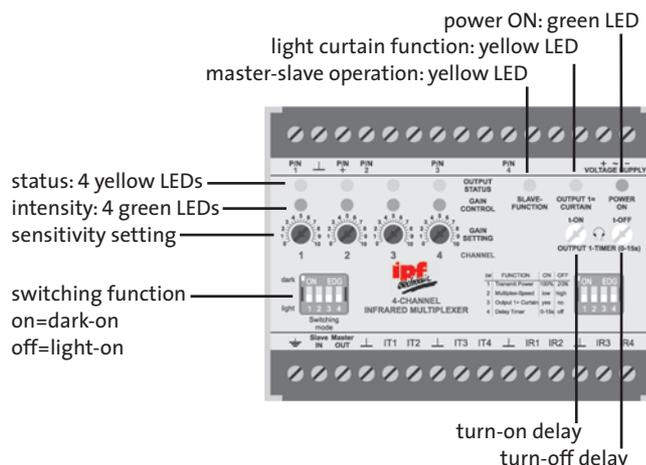
connection

operating voltage



4 channel multiplexer, transistor output, time delay

- up to 30m operating distance
- sensitivity adjustable with rotary knob for each channel
- 1 pnp / npn transistor switching output for each channel
- turn-on and turn-off delay for channel 1
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function for each channel
- 32msec / 16msec selectable multiplex speed
- master-slave operation
- light curtain function



Technical data and list of articles

24V DC / +20% / 4.5W

OV540520

transistor output

4x npn/pnp, max. 30V DC / 20mA

sampling frequency

28Hz

alarm output

-

measuring system

modulated IR-light, 4kHz

operating distance

up to 30m depending on type of sensor

multiplex speed

32msec / 16msec

master-slave operation

yes

light curtain function

yes

basic transmitting power

20% / 100%

turn-on / turn-off delay

0 to 15sec

switching function

light-on / dark-on

housing material

plastic

system of protection

IP40 to EN 60529

ambient temperature

-25°C to +50°C

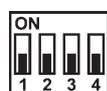
connection

terminal strip 4mm²

transmitter and receiver / accessories

see pages 24 to 26

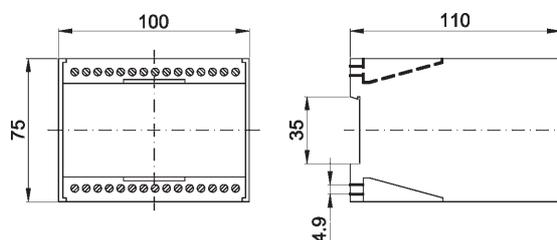
DIP switch position



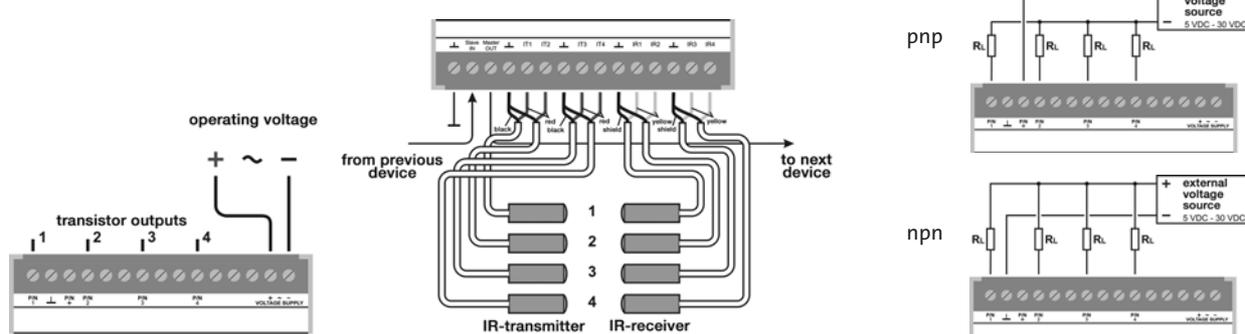
| 1 | | 2 | | 3 | | 4 | |
|--------------------------|-----|-----------------|-----|---------------|-----|--------------------------|-----|
| basic transmitting power | | multiplex speed | | light curtain | | turn-on / turn-off delay | |
| 100% | ON | 32 ms | ON | Ein | ON | Ein | ON |
| 20% | OFF | 16 ms | OFF | Aus | OFF | Aus | OFF |

Manufacturer's setting: highlighted grey

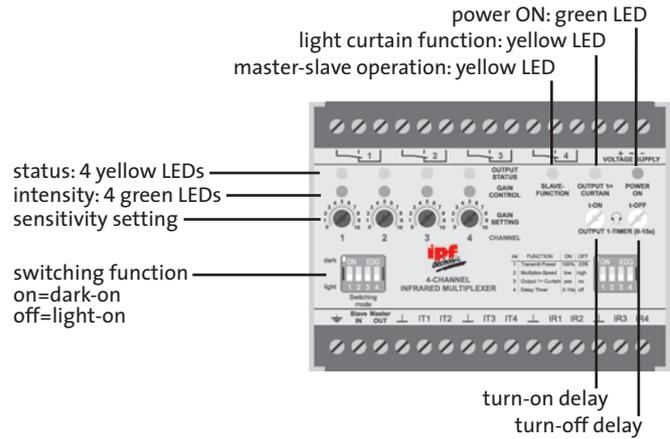
dimensional drawing



connection



- up to 30m operating distance
- sensitivity adjustable with rotary knob for each channel
- 1 relay output for each channel
- turn-on and turn-off delay for channel 1
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function for each channel
- 32msec / 16msec selectable multiplex speed
- master-slave operation
- light curtain function



Technical data and list of articles

| | |
|--|---|
| 24V DC / ±20% / 4.5W | OV540920 |
| 230V AC / ±10% / 6VA | OV544920 |
| relay output | 4x change-over contacts: 5A, 230V AC (24V DC) |
| sampling frequency | 20Hz |
| alarm output | - |
| measuring system | modulated IR-light, 4kHz |
| operating distance | up to 30m depending on type of sensor |
| multiplex speed | 32msec / 16msec |
| master-slave operation | yes |
| light curtain function | yes |
| basic transmitting power | 20% / 100% |
| turn-on / turn-off delay | 0 to 15sec |
| switching function | light-on / dark-on |
| housing material | plastic |
| system of protection | IP20 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | terminal strip 4mm ² |
| transmitter and receiver / accessories | see pages 24 to 26 |

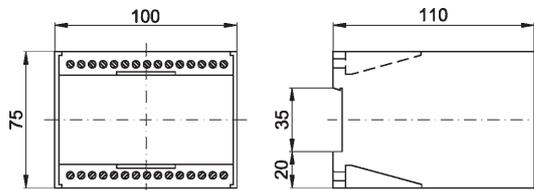
DIP switch position



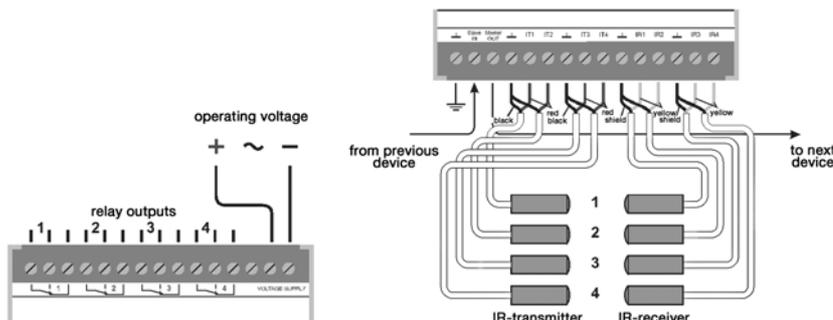
| 1 | | 2 | | 3 | | 4 | |
|--------------------------|-----|-----------------|-----|---------------|-----|--------------------------|-----|
| basic transmitting power | | multiplex speed | | light curtain | | turn-on / turn-off delay | |
| 100% | ON | 32 ms | ON | Ein | ON | Ein | ON |
| 20% | OFF | 16 ms | OFF | Aus | OFF | Aus | OFF |

Manufacturer's setting: highlighted grey

dimensional drawing

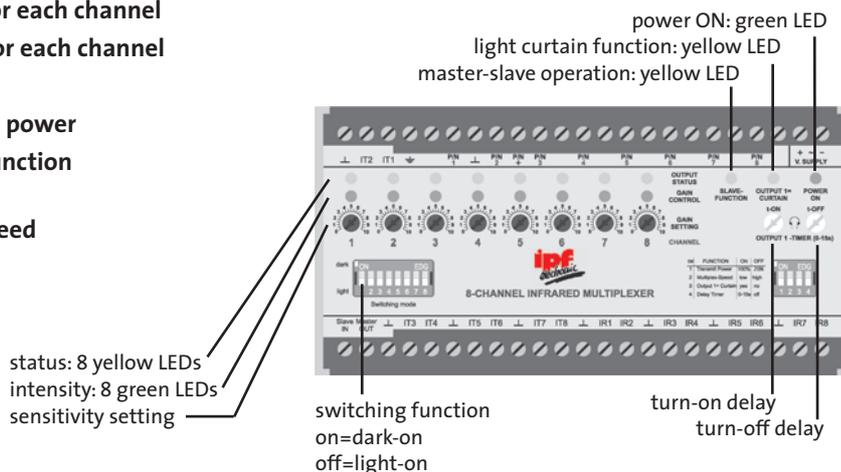


connection



8 channel multiplexer, transistor output, time delay

- up to 30m operating distance
- sensitivity adjustable with rotary knob for each channel
- 1 pnp / npn transistor switching output for each channel
- turn-on and turn-off delay for channel 1
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function for each channel
- 68msec / 34msec selectable multiplex speed
- master-slave operation
- light curtain function



Technical data and list of articles

| | |
|--|---------------------------------------|
| 24V DC / $\pm 20\%$ / 8.0W | OV590520 |
| transistor output | 8x npn/pnp, max. 30V DC / 100mA |
| sampling frequency | 15Hz |
| alarm output | - |
| measuring system | modulated IR-light, 4kHz |
| operating distance | up to 30m depending on type of sensor |
| multiplex speed | 68msec / 34msec |
| master-slave operation | yes |
| light curtain function | yes |
| basic transmitting power | 20% / 100% |
| turn-on / turn-off delay | 0 to 15sec |
| switching function | light-on / dark-on |
| housing material | plastic |
| system of protection | IP20 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | terminal strip 4mm ² |
| transmitter and receiver / accessories | see pages 24 to 26 |

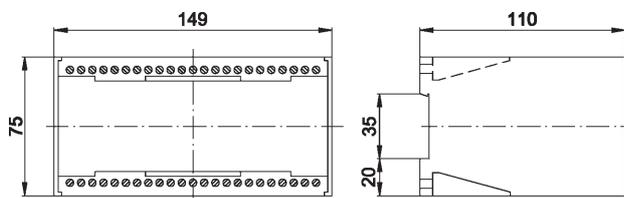
DIP switch position



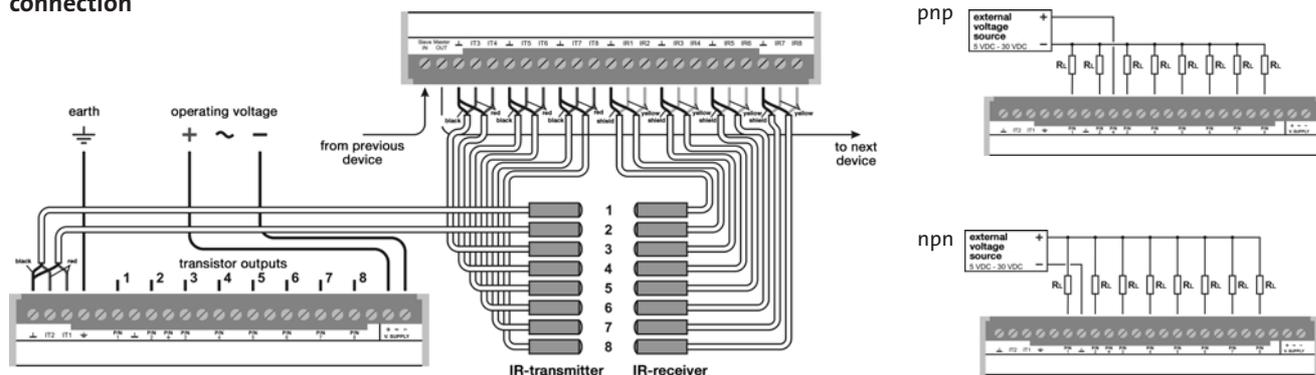
| | 1 | 2 | 3 | 4 |
|--------------------------|-----|-------|-----|-----|
| basic transmitting power | | | | |
| 100% | ON | 68 ms | ON | Ein |
| 20% | OFF | 34 ms | OFF | Aus |
| light curtain | | | | |
| ON | | | ON | ON |
| OFF | | | OFF | OFF |
| turn-on / turn-off delay | | | | |
| Ein | | | ON | ON |
| Aus | | | OFF | OFF |

Manufacturer's setting: highlighted grey

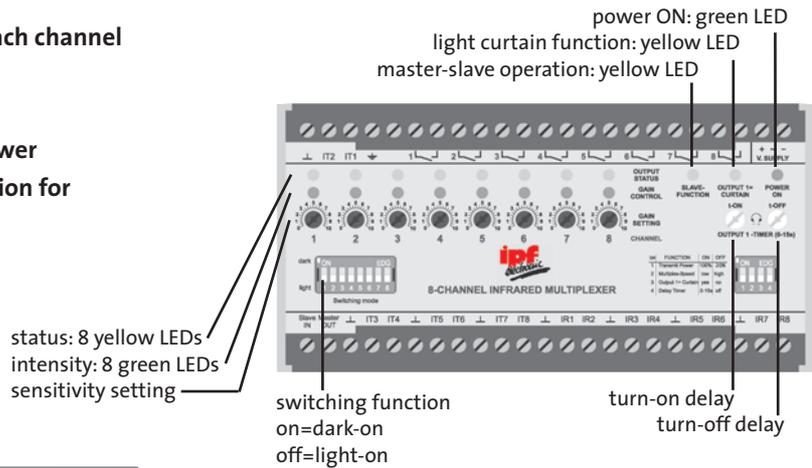
dimensional drawing



connection



- up to 30m operating distance
- sensitivity adjustable with rotary knob for each channel
- 1 relay output for each channel
- turn-on and turn-off delay for channel 1
- 20% / 100% selectable basic transmitting power
- selectable light-on / dark-on switching function for each channel
- 68msec / 34msec selectable multiplex speed
- master-slave operation
- light curtain function



Technical data and list of articles

| | |
|--|---|
| 24V DC / $\pm 20\%$ / 8.0W | OV590920 |
| 230V AC / $\pm 10\%$ / 10VA | OV594920 |
| relay output | 8 x make contacts (NO), each 5A, 230V AC (24V DC) |
| sampling frequency | 15Hz |
| alarm output | - |
| measuring system | modulated IR-light, 4kHz |
| operating distance | up to 30m depending on type of sensor |
| multiplex speed | 68msec / 34msec |
| master-slave operation | yes |
| light curtain function | yes |
| basic transmitting power | 20% / 100% |
| turn-on / turn-off delay | 0 to 15sec |
| switching function | light-on / dark-on |
| housing material | plastic |
| system of protection | IP20 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | terminal strip 4mm ² |
| transmitter and receiver / accessories | see pages 24 to 26 |

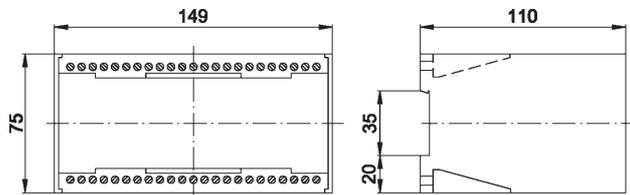
DIP switch position



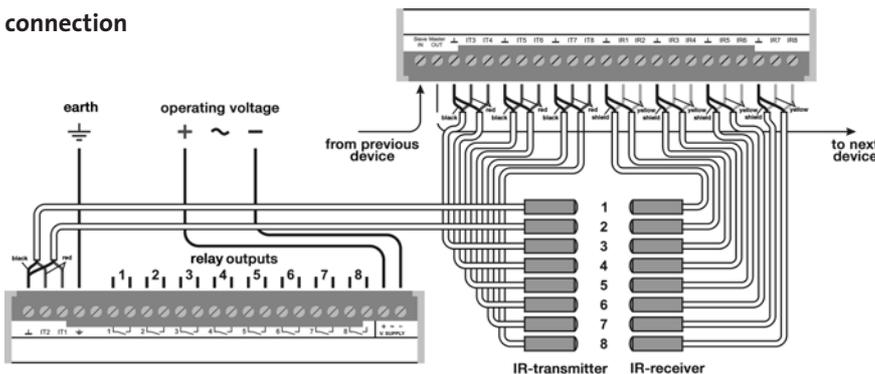
| | 1 | 2 | 3 | 4 |
|--------------------------|------|-------|---------------|--------------------------|
| basic transmitting power | 100% | 68 ms | light curtain | turn-on / turn-off delay |
| | ON | ON | Ein | ON |
| | OFF | 34 ms | Aus | Aus |
| | OFF | OFF | OFF | OFF |

Manufacturer's setting: highlighted grey

dimensional drawing



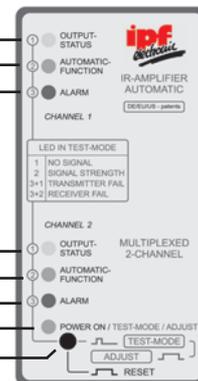
connection



▶ 2 channel automatic multiplexer, relay output

- up to 23m operating distance
- automatic transmitting power switchover
- test function to review the quality of the light passing and mounting
- 1 relay output for each channel
- 4-way selectable basic transmitting power
- selectable light-on / dark-on switching function for each channel

status channel 1: yellow LED
 regulation channel 1: green LED
 alarm channel 1: red LED



status channel 2: yellow LED
 regulation channel 2: green LED
 alarm channel 2: red LED
 power ON: multi-colour LED
 test / reset button

Technical data and list of articles

24V DC / ±20% / 2.0W

OV580940

230V DC / ±10% / 4VA

OV584940

relay output
 reaction time

2 x make contacts: 5A / 230V AC (24V DC)
 max. 8msec

alarm output

-

measuring system

modulated IR-light, 4kHz

operating distance

up to 23m depending on type of sensor

multiplex speed

4msec

master-slave operation

-

light curtain function

-

basic transmitting power

low 1 / low 2 / high 1 / high 2

turn-on / turn-off delay

-

switching function

light-on / dark-on

housing material

plastic

system of protection

IP40 to EN 60529

ambient temperature

-25°C to +50°C

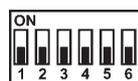
connection

11pin plug-in base

transmitter and receiver / accessories

see pages 24 to 26

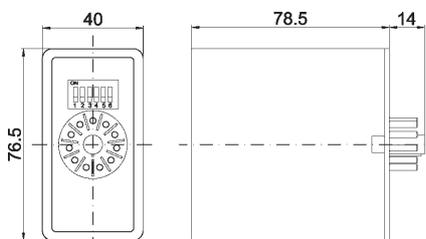
DIP switch position



| | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------|--------------------------|-----|--------------------|-----------|--------|--------------------|
| channel 1 | basic transmitting power | | switching function | channel 2 | | switching function |
| High 2 | ON | ON | dark | ON | High 2 | ON |
| High 1 | ON | OFF | dark | ON | High 1 | OFF |
| Low 2 | OFF | ON | light | OFF | Low 2 | ON |
| Low 1 | OFF | OFF | light | OFF | Low 1 | OFF |

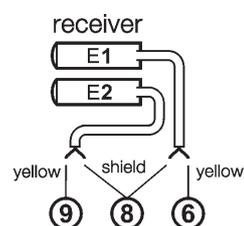
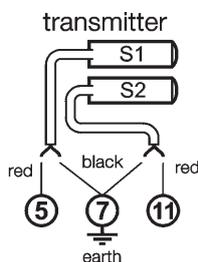
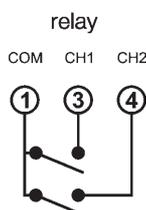
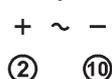
Manufacturer's setting: highlighted grey

dimensional drawing

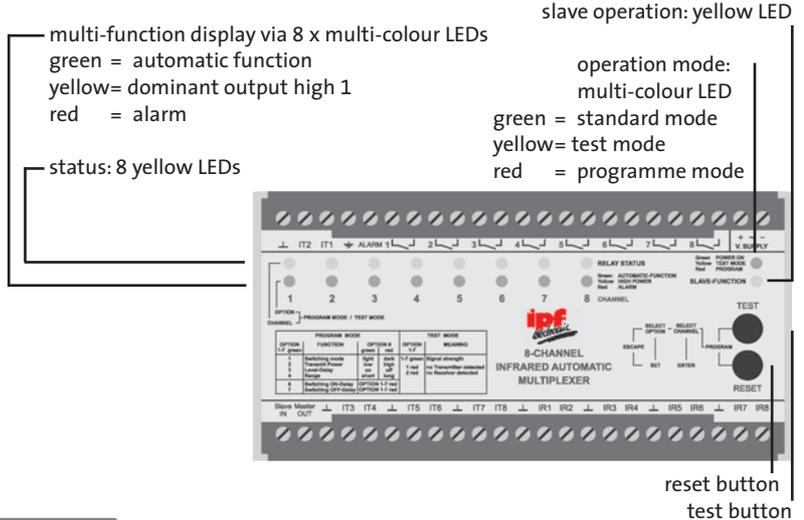


connection

operating voltage



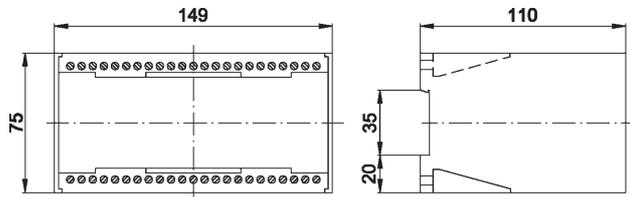
- up to 20m operating distance
- automatic transmitting power setting
- test function to review the quality of the light passing and mounting
- 1 relay output for each channel
- programmable turn-on, turn-off, control delay for each channel
- programmable light-on / dark-on switching function for each channel
- programmable 2-way basic transmitting power
- master-slave operation



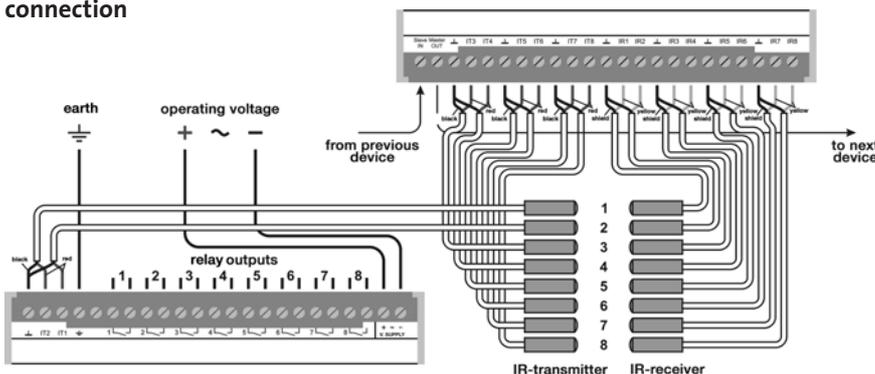
Technical data and list of articles

| | |
|--|---|
| 24V DC / ±20% / 8.0W | OV590935 |
| 230V AC / ±10% / 10VA | OV594935 |
| relay output | 8 x make contacts (NO), each 5A, 230V AC (24V DC) |
| sampling frequency | 15Hz |
| alarm output | pnp, 24V DC / 100mA (AC: 5mA) |
| measuring system | modulated IR-light, 4kHz |
| operating distance | up to 20m depending on type of sensor |
| multiplex speed | 34msec |
| master-slave operation | yes |
| light curtain function | - |
| basic transmitting power | low / high |
| turn-on / turn-off delay | 0 to 7sec |
| switching function | light-on / dark-on |
| housing material | plastic |
| system of protection | IP20 to EN 60529 |
| ambient temperature | -25°C to +50°C |
| connection | terminal strip 4mm ² |
| transmitter and receiver / accessories | see pages 24 to 26 |

dimensional drawing



connection



▶ list of multiplex amplifiers

PRODUCT: amplifier multiplex, design 54, 58, 59

| article-no. | design | description | comment | housing | voltage | output | connection | fig. |
|-------------|--------------|-------------|--------------------|---------|---------|-----------|--------------------|------|
| OV580920 | 40x76.5x78.5 | multiplexer | 2way | plastic | 24V DC | 2 relays | plug-in base 11pin | 1 |
| OV584920 | 40x76.5x78.5 | multiplexer | 2way | plastic | 230V AC | 2 relays | plug-in base 11pin | 1 |
| OV580925 | 40x76.5x78.5 | multiplexer | 2way, time 0-15sec | plastic | 24V DC | 2 relays | plug-in base 11pin | 1 |
| OV584925 | 40x76.5x78.5 | multiplexer | 2way, time 0-15sec | plastic | 230V AC | 2 relays | plug-in base 11pin | 1 |
| OV580940 | 40x76.5x78.5 | multiplexer | 2way, auto | plastic | 24V DC | 2 relays | plug-in base 11pin | 2 |
| OV584940 | 40x76.5x78.5 | multiplexer | 2way, auto | plastic | 230V AC | 2 relays | plug-in base 11pin | 2 |
| OV540520 | 100x75x110 | multiplexer | 4way, time 0-15sec | plastic | 24V DC | 4 pnp/npn | terminals | 3 |
| OV540920 | 100x75x110 | multiplexer | 4way, time 0-15sec | plastic | 24V DC | 2 relays | terminals | 3 |
| OV544920 | 100x75x110 | multiplexer | 4way, time 0-15sec | plastic | 230V AC | 2 relays | terminals | 3 |
| OV590520 | 149x75x110 | multiplexer | 8way, time 0-15sec | plastic | 24V DC | 8 pnp/npn | terminals | 4 |
| OV590920 | 149x75x110 | multiplexer | 8way, time 0-15sec | plastic | 24V DC | 8 relays | terminals | 4 |
| OV594920 | 149x75x110 | multiplexer | 8way, time 0-15sec | plastic | 230V AC | 8 relays | terminals | 4 |
| OV590935 | 149x75x110 | multiplexer | 8way, time 0-7sec | plastic | 24V DC | 8 relays | terminals | 4 |
| OV594935 | 149x75x110 | multiplexer | 8way, time 0-7sec | plastic | 230V AC | 8 relays | terminals | 4 |

fig. 1

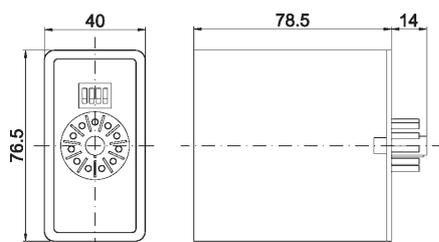


fig. 2

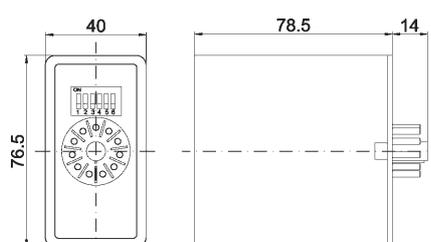


fig. 3

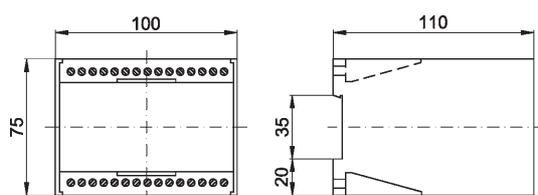


fig. 4

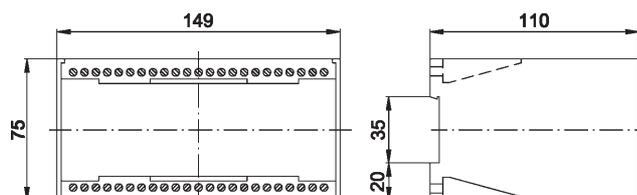


fig. 1

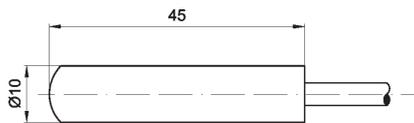


fig. 2

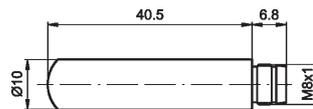


fig. 3

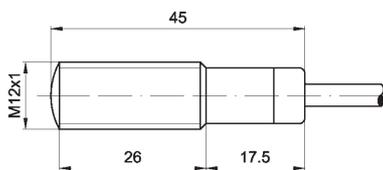


fig. 4

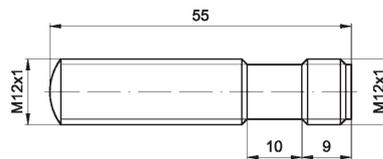


fig. 5

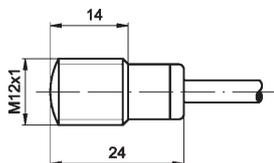


fig. 6

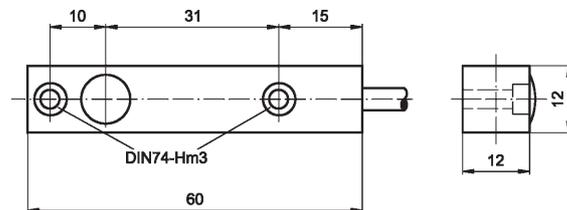
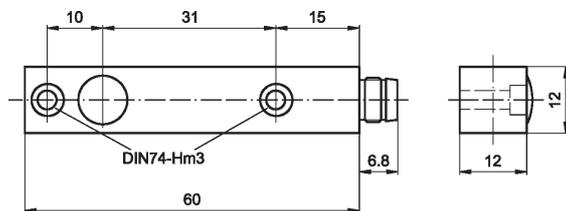


fig. 7

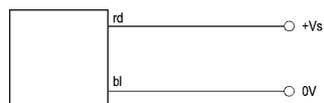

PRODUCT: threaded, round and rectangular devices, design 10, 12 and 13

| article-no. | design | description | comment | length | housing | voltage | sn | connection | fig. |
|-------------|--------|-------------|-------------------|--------|-----------------|-------------------------|----|---------------|------|
| OS106001 | Ø 10mm | transmitter | | 45 | plastic | connection to amplifier | | 5m cable | 1 |
| OE106001 | Ø 10mm | receiver | 15Hz | 45 | plastic | connection to amplifier | * | 5m cable | 1 |
| OS106003 | Ø 10mm | transmitter | | 45 | plastic | connection to amplifier | | 15m cable | 1 |
| OE106003 | Ø 10mm | receiver | 15Hz | 45 | plastic | connection to amplifier | * | 15m cable | 1 |
| OS106070 | Ø 10mm | transmitter | | 47,3 | plastic | connection to amplifier | | M8-connector | 2 |
| OE106070 | Ø 10mm | receiver | 15Hz | 47,3 | plastic | connection to amplifier | * | M8-connector | 2 |
| OS126001 | M12x1 | transmitter | | 45 | brass, n-pltd | connection to amplifier | | 5m cable | 3 |
| OS126101 | M12x1 | transmitter | light emission 6° | 45 | stainless steel | connection to amplifier | | 5m cable | 3 |
| OE126001 | M12x1 | receiver | 15Hz | 45 | brass, n-pltd | connection to amplifier | * | 5m cable | 3 |
| OS126003 | M12x1 | transmitter | | 45 | brass, n-pltd | connection to amplifier | | 15m cable | 3 |
| OE126003 | M12x1 | receiver | 15Hz | 45 | brass, n-pltd | connection to amplifier | * | 15m cable | 3 |
| OS126020 | M12x1 | transmitter | | 55 | stainless steel | connection to amplifier | | M12-connector | 4 |
| OE126020 | M12x1 | receiver | 15Hz | 55 | stainless steel | connection to amplifier | * | M12-connector | 4 |
| OS126303 | M12x1 | transmitter | light emission 6° | 25 | brass, n-pltd | connection to amplifier | | 15m cable | 5 |
| OE126303 | M12x1 | receiver | 15Hz | 25 | brass, n-pltd | connection to amplifier | * | 15m cable | 5 |
| OS136003 | 12x12 | transmitter | | 60 | aluminium | connection to amplifier | | 15m cable | 6 |
| OE136003 | 12x12 | receiver | 15Hz | 60 | aluminium | connection to amplifier | * | 15m cable | 6 |
| OS136070 | 12x12 | transmitter | | 66,8 | aluminium | connection to amplifier | | M8-connector | 7 |
| OE136070 | 12x12 | receiver | 15Hz | 66,8 | aluminium | connection to amplifier | * | M8-connector | 7 |

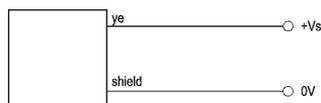
* sn depending on type of amplifier

▶ transmitters and receivers

connection cable version transmitter

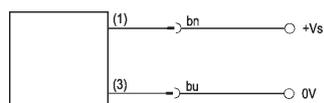


cable version receiver

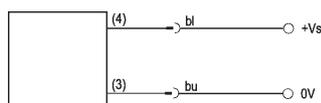


wire colours: rd = red, bl = black, ye = yellow, shield = shielding

connection connector version transmitter



connector version receiver



wire colours: bn = brown (1), bu = blue (3), bl = black (4)

fig. 8

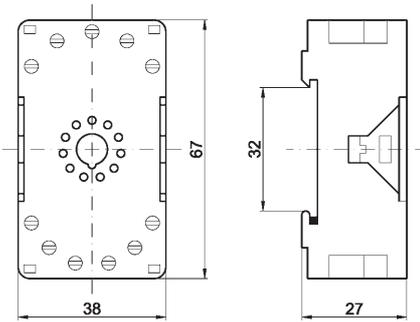


fig. 9

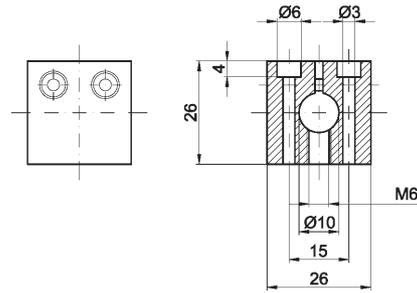


fig. 10

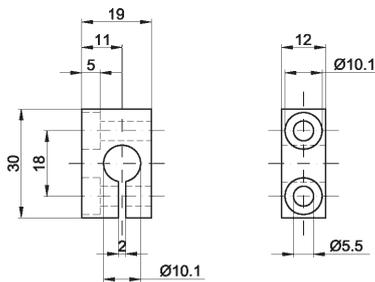


fig. 11

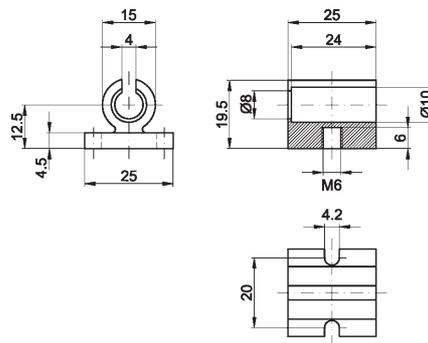


fig. 12

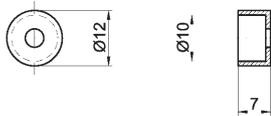


fig. 13

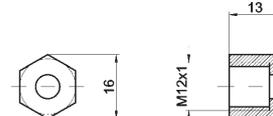
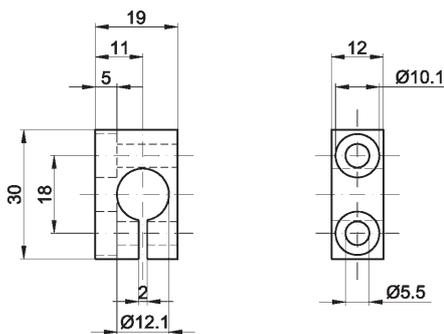


fig. 14



| article-no. | description1 | description2 | fig. |
|-------------|-----------------------------|---|------|
| AV000004 | 11pin plug-in base, plastic | for amplifier | 8 |
| AV000042 | spring clip | fixing for plug-in base AV000004 | w/o |
| AY000004 | mounting clip, plastic | for design Ø 10mm | 9 |
| AY000020 | mounting clip, aluminium | for design Ø 10mm | 10 |
| AY000042 | clamp holder, plastic | for design Ø 10mm | 11 |
| AO000021 | hole shade | for design Ø 10mm, hole diameter 1mm | 12 |
| AO000023 | slit screen | for design Ø 10mm, slit width 1mm | 12 |
| AO000022 | hole shade | for design M12x1, hole diameter 1mm | 13 |
| AO000048 | hole shade | for design M12x1, glass hole diameter 1mm | 13 |
| AO000064 | slit screen | for design M12x1, slit width 1mm | 13 |
| AO000024 | slit screen | for design M12x1, glass slit width 1mm | 13 |
| AO000063 | hole shade | for design M12x1, glass hole diameter 8mm | 13 |
| AY000032 | mounting clip, aluminium | for design M12x1 | 14 |