

ARGUS 220 Timer

User Guide



565619

Accessories

- Mounting bracket (Art. no. 56529.)
- Radio module for ARGUS 220 movement detector (Art. no. 565495)

For your safety

⚠ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Safe electrical installation must be carried out only by skilled professionals. Skilled professionals must prove profound knowledge in the following areas:

- Connecting to installation networks
- Connecting several electrical devices
- Laying electric cables
- Safety standards, local wiring rules and regulations

Failure to follow these instructions will result in death or serious injury.

ARGUS introduction

The ARGUS 220 Timer (hereafter called ARGUS) is an electronic movement detector for inside and outside use. It registers moving sources of heat within its range, e.g. people, and switches the loads connected whenever it detects a movement. This could include:

- ohmic loads (e.g. 230 V incandescent and halogen lamps)
- inductive loads (e.g. low-voltage halogen lamps with inductive transformer)
- capacitive loads (e.g. electronic transformers)

In addition, it is fitted with a light-sensitive time switch which enables it to switch connected loads on and off when an adjustable twilight threshold has been reached, or at particular times which can also be set.

Surface monitoring of 220° for larger house fronts and areas of the house (max. range of 16 m) is combined with a 360° short-range zone with a radius of approx. 4 m. The operating elements for setting the brightness threshold, switching duration and sensitivity are located under the cover plate for protection.

The ARGUS can be mounted on the wall or ceiling and also on to corners or fixed pipes with the mounting bracket (art. no. 5652 ..) which is available as an accessory.

The integrated functional display lights up when movement is detected and thus simplifies the alignment of the device at the installation site.

The area of detection can be adapted to the local conditions due to the horizontally, vertically and axially adjustable sensor head. You can also block unwanted zones or sources of interference (e.g. trees) from the area of detection using the masking segments provided.

The device is fitted with a light sensor whose brightness threshold can be set between approx. 3 and 1000 lux.

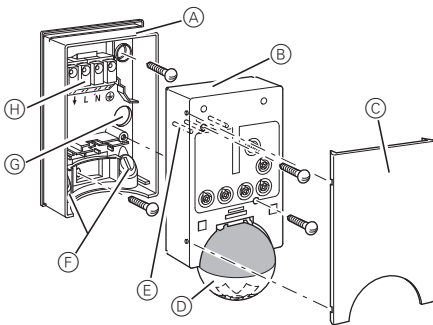
If you additionally equip the ARGUS with an ARGUS 220 movement detector radio module (565495), you can connect several ARGUS 220 Connect or ARGUS 220 Timer devices wirelessly. When one of the movement detectors registers a movement, it transmits to all taught-in movement detectors or receivers via the radio module; they then also switch on their connected loads.

Using ARGUS with alarm systems

- i** Movement/presence detectors are not suitable for use as components of an alarm system.
- i** Movement/presence detectors can trigger false alarms if the installation site has been chosen unfavourably.

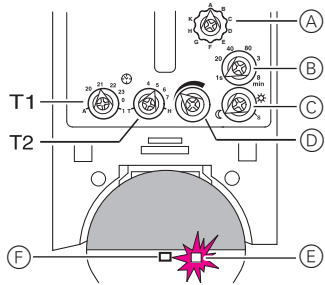
Movement/presence detectors switch on as soon as they detect a moving heat source. This can be a person, but also animals, trees, cars or differences in temperature in windows. In order to avoid false alarms, the chosen installation site should be such that undesired heat sources cannot be detected (see section „Selecting the installation site“).

Connections, displays and operating elements



- A** Wall connection box
- B** Top section
- C** Cover plate
- D** Sensor head
- E** Contact pins
- F** Cable routing for connecting cable from underneath
- G** Cable routing for connecting cable from behind
- H** Terminal block for the connecting cable and for locating the contact pins

The ARGUS operating elements are protected under the cover plate. The arrow's position on the controllers shows you the set values.



- A** ARGUS settings controller: Radio operation
- B** Switching duration controller
- C** Brightness threshold controller
- D** Functional display (lights up each time movement is detected)
- E** Brightness sensor (must not be covered)
- F** Sensitivity controller
- T1** Timer function for setting the switching time in the evening (e.g. 23:00 hours)
- T2** Timer function for setting the switching time in the evening (e.g. 05:00 hours)

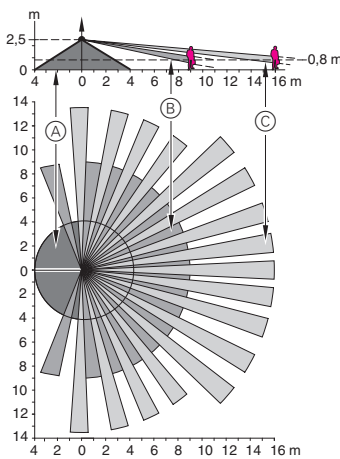
Selecting the installation site

Explanation of the symbols used

- OK** Correct
- ✗** Not optimal
- ✗** Incorrect

When selecting a suitable installation site, you should take a number of factors into account so that the movement detector operates optimally.

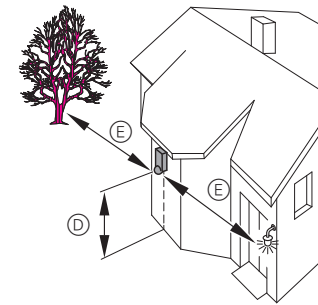
- i** The following figure shows the ranges of the ARGUS at average temperature conditions and a mounting height of 2.5 m. The range of a movement detector can vary greatly depending on the temperature.



Inner security zone (A): Angle of detection 360° over a radius of approx. 4 m.

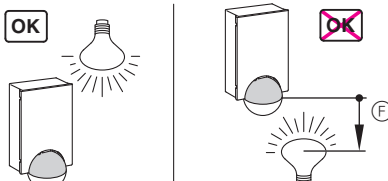
Middle security zone (B): Angle of detection 220° with an area of detection of approx. 9 m x 18 m.

Outer security zone (C): Angle of detection 220° with an area of detection of approx. 16 m x 28 m.



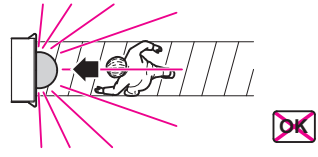
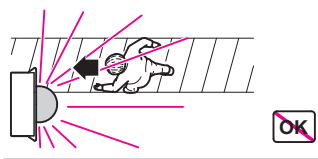
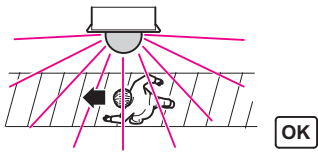
Mounting height (D): 2-3 m. For optimum monitoring, we recommend a height of 2.5 m on a solid and even base.

Minimum distance (E) to sources of optical interference: 5 m. If necessary, use the segments supplied to shade the device.

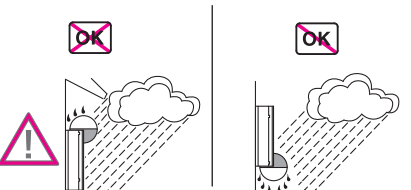
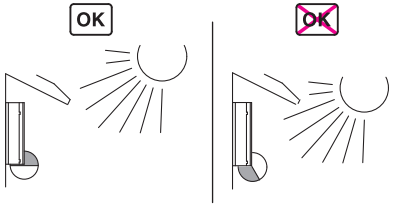


Minimum distance (F) between luminaire and movement detector: 5 m. If this distance cannot be achieved, you can use the segments provided to "mask" the light source from the area of detection.

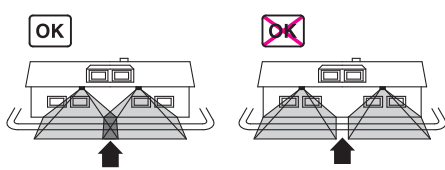
If possible, install the movement detector sideways to the direction of movement.



To avoid the connected load being switched on due to environmental influences, the ARGUS should be installed so that it is protected against rain and direct sunlight. A raindrop running over the lens, for example, can activate the movement detector.

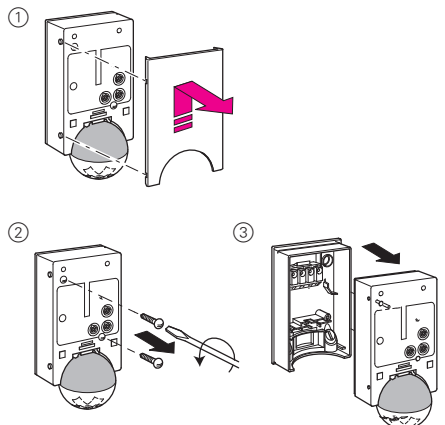


If you wish to attach several movement detectors, install them so that the detection areas of the individual movement detectors intersect each other.

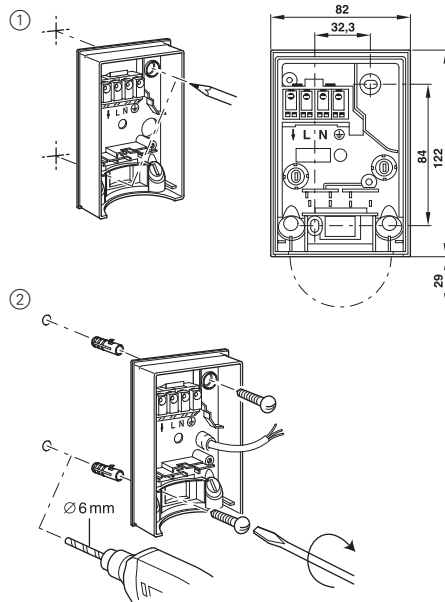


ARGUS installation

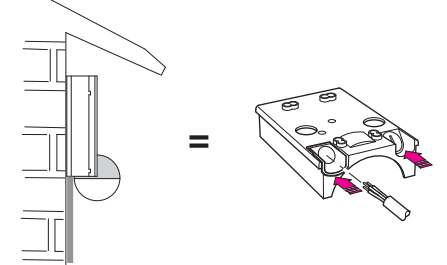
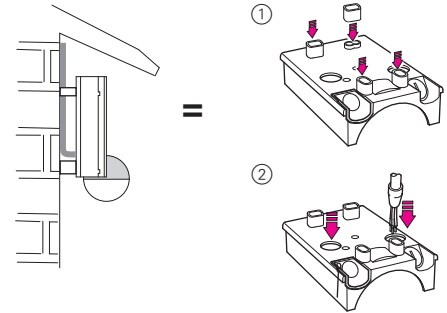
Dismantlement of the top section of the ARGUS



Installing the ARGUS to the wall



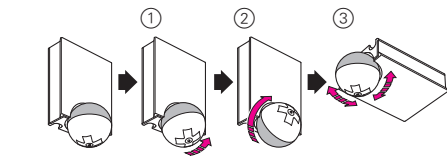
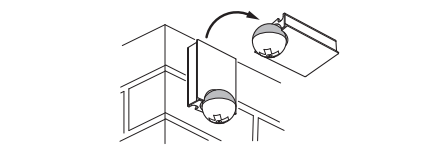
Feeding in the connecting cable



Installing the ARGUS on the ceiling

In order to install the ARGUS on the ceiling, you must rotate the sensor head. Change the direction of rotation once you have reached the end stops.

- ① Turn the sensor head upwards as far as it will go.
- ② Turn the sensor head clockwise as far as it will go.
- ③ Align the sensor head.



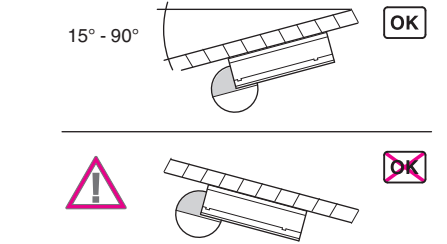
Notice

HAZARD OF EQUIPMENT DAMAGE
Condensation must be able to drain off.

- For sloping ceilings, always mount the device with the spherical head pointing downwards at an angle of 15° - 90°.

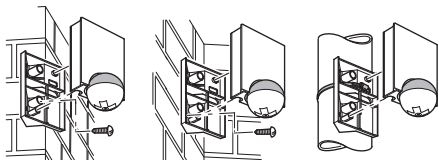
Failure to follow these instructions can damage the device.

- i** Type of protection IP 55 cannot be guaranteed if the mounting bracket is not 15° - 90°.



Installing the ARGUS on corners and fixedpipes

You can attach the ARGUS to inner/outer corners or fixed pipes using the mounting bracket (art. no. 5652..). You can feed the connecting cable to the device from behind through the mounting bracket.



Connecting the ARGUS

Notice

HAZARD OF EQUIPMENT DAMAGE

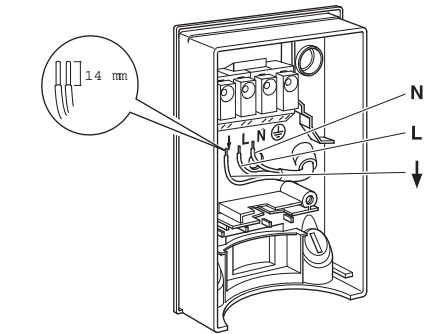
Operation only possible with sinusoidal mains voltages.

- Phase control dimmers or inverters with square-wave or trapezoidal voltage curves will damage the device.

Failure to follow these instructions can damage the device.

The device must be fused using a 16 A miniature circuit breaker.

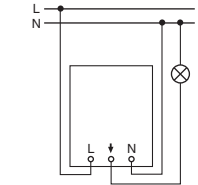
When switching inductive loads such as transformers, relays, contactors or fluorescent lamps, spikes occur which could lead to the load being switched on again ("maintained light effect"). Connect a capacitor in parallel to the inductive load to reduce these spikes.



"Through-wiring" to other loads is permitted.

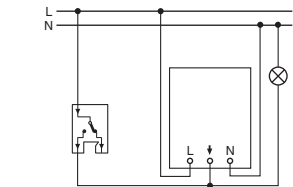
Installation options

- ARGUS permanently connected to the mains
ARGUS constantly monitors its area



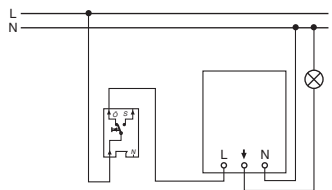
- ARGUS combined with two-way switch

Depending on the switch position, either maintained light or automatic mode



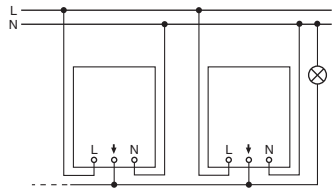
- ARGUS combined with break contact

The ARGUS is always ready for operation. By pressing the push-button (the power is briefly disconnected for 2–3 seconds), the ARGUS is switched on for the set period. Every further movement increases the switching duration.



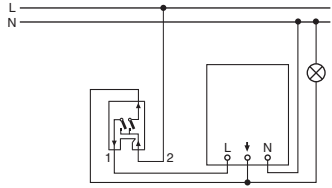
- ARGUS connected in parallel

Several ARGUS devices working together can switch a lamp group when the maximum switching capacity of one device is not exceeded. To do this, you must reduce the sensitivity of the devices. For technical and functional reasons, we do not advise using more than four ARGUS devices in one group.



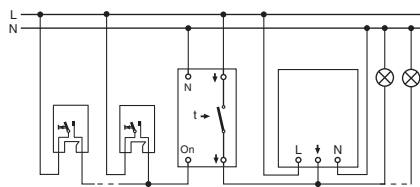
- ARGUS combined with two-circuit switch

Depending on the switch position, either manual, automatic mode or "OFF" results. In position 1, the luminaire is switched on by ARGUS (automatic) and in position 2, it is switched on permanently (manual).

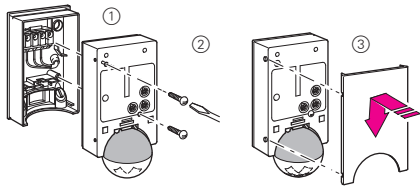


- ARGUS parallel to staircase timer

Either ARGUS or the staircase timer switches the lights on for a certain period.



Installation of the top section of the ARGUS



The ARGUS can now be put into operation.

Putting ARGUS into operation

- 1 Connect the supply voltage.

The load is switched on for approx. 10 s or for the set period. The functional display lights up for approx. 10 s.

Conducting a functional test

The brightness sensor must not be covered up.

- 1 Set the switching duration to 1 second (left stop).
- 2 Set the brightness threshold to daytime operation (right stop).
- 3 Set the sensitivity controller to maximum (right stop).
- 4 Test the functionality of ARGUS and the loads connected to it by walking to and fro in the detection area.

The functional display lights up each time movement is detected.

Setting ARGUS

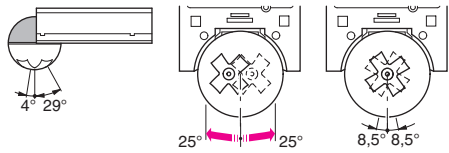
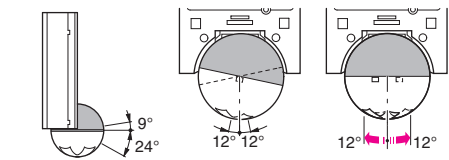
Notice

HAZARD OF EQUIPMENT DAMAGE

- The sensor head should only be rotated until it reaches the stop and no further. To achieve an angle "above" the stop, change the direction of rotation.

Failure to follow these instructions can damage the device.

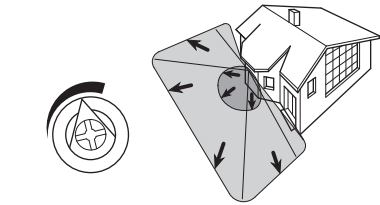
- 1 Align the sensor head in the direction of the area that is to be monitored.



- 2 From its edge step into the area of detection to see whether the ARGUS switches the load and the functional display as required.

Setting the sensitivity

Here you can infinitely set the distance up to which ARGUS detects movements (any distance up to max. 16 m).



Setting the brightness threshold

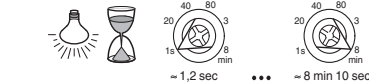
Here you can infinitely set the ambient brightness level at which the ARGUS detects movements and triggers a switching procedure.

- Moon symbol (night operation): The ARGUS will only detect movements during the hours of darkness (approx. 3 lux).
- Sun symbol (day and night operation): The ARGUS detects movements up to approx. 1000 lux.



Setting the switching duration

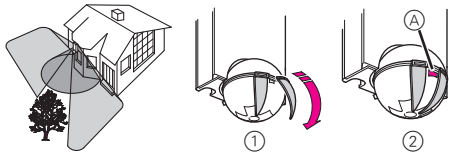
Here you can set how long the loads connected to ARGUS are switched on for. When a movement is detected, the load is switched on and stays switched on until the set period has elapsed. Every further movement restarts the switching duration.



The ARGUS ignores the light-sensitive switch once the load has been switched on. If the movement detector does not switch the load off again, the reason probably is that the ARGUS constantly detects further movements and thus keeps re-starting the switching duration.

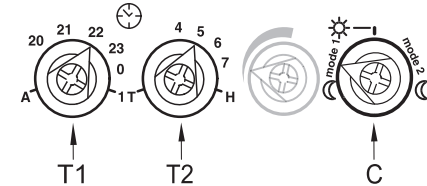
Blocking out individual areas

Using the four segments supplied, you can block out unwanted zones and sources of interference from the area of detection.



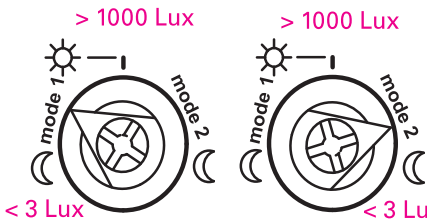
Ensure that the brightness sensor (A) is not covered, as the sensitivity to light is otherwise reduced.

Setting the timer function



mode 1

mode 2



Use the rotary switches T1 and T2 to set the times at which ARGUS is to do something other than only detect movement. Outside of the times set, ARGUS reacts to movements as normal. Use the rotary switch C to set the brightness threshold level at which ARGUS is to detect movement; turn it either to the left side (mode 1) or the right side (mode 2).

If ARGUS is only to switch on when movement is detected

1. Turn the rotary switch T1 to position A.
2. Trun the rotary switch C to mode 1.

If ARGUS is to switch on at certain times even when no movement is detected

Example 1: The light is to be on continuously from dusk until 10 p.m. and from 5 a.m. until dawn. Between 10 p.m. and 5 a.m., ARGUS is to switch the light on if it detects movement.

1. Turn the rotary switch T1 to "22".
2. Turn the rotary switch T2 to "5".
3. Turnthe rotary switch C to mode 1.

Example 2: The light is to be on continuously from dusk until 10 p.m. and until dawn it is to be switched on only when it detects movement.

1. Turn the rotary switch T1 to "22".
2. Turn the rotary switch T2 to "H".
3. Turnthe rotary switch C to mode 1.

If ARGUS is not to switch on at certain times, even when movement is detected

Example 3: The light is to be off continuously from dusk till 10 p.m. The light should be off continuously from 5 a.m. till dawn. Between 10 p.m. and 5 a.m., ARGUS is to switch the light on if it detects movement.

1. Turn the rotary switch T1 to "22".
2. Turn the rotary switch T2 to "5".
3. Turnthe rotary switch C to mode 2.

Example 4: The light is to be off continuously from dusk till 10 p.m., but from 10 p.m. till dawn it is to be switched on if it detects movement.

1. Turn the rotary switch T1 to "22".
2. Turn the rotary switch T2 to "H".
3. Turnthe rotary switch C to mode 2.

When calculating the time of day, ARGUS ignores the timer function set in the first night an only switches loads when it detects movements. If the supply voltage fails for a longer period of time, it calculates the time of day again using sunrise and sunset as guides. The actual time of day may deviate from the time of day calculated depending on global positioning. In this case, adjust the rotary switches T1 and T2 by the deviation which has been determined.

How to calculate the local time deviation

The table which follows tells you by how many minutes your local time deviates from standard time (Central European Time CET). Use this deviation value to correct your required switch-on or switch-off time if you want to use the timer function.

Example:

The light-sensitive time switch is to switch off at 21:00. If you live in Warsaw, the setting switch should be set to 21:24; if you live in Aachen, you must set it to 20:24, and so on.

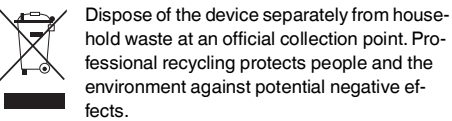
City	Degree of longitude (approx.)	Deviation
Warsaw	21° east	+24 min.
Budapest	19° east	+16 min.
Vienna	16° 30' east	+6 min.
Goerlitz	15° east	0 min.
Berlin	13° 30' east	-6 min.
Munich	11° 30' east	-14 min.
Schwerin	11° 30' east	-14 min.
Hamburg	10° east	-20 min.
Frankfurt/Main	7° 45' east	-29 min.
Aachen	6° east	-36 min.
Amsterdam	5° east	-40 min.
Brussels	4° 20' east	-43 min.
Paris	2° 20' east	-50 min.
Madrid	3° 35' west	-74 min.

Note: When operating the light-sensitive time switch in time zones other than CET, you must calculate the deviation of your local time from the time in the relevant zone yourself.

Rule-of-thumb: 1degree of longitude corresponds to a deviation of 4 minutes.

Technical data

Nominal voltage:	AC 230 V ±10%, 50 Hz
Protection:	The device must be fused using a 16 A miniature circuit breaker.
Max. switching current:	16 A, AC 230 V, cosφ = 1
Nominal output	
Incandescent lamps:	AC 230 V, max. 2000 W
Halogen lamps:	AC 230 V, max. 1200 W
Fluorescent lamps:	AC 230 V, max. 10 A, 35 µF
Capacitive load:	10 A, 35 µF
Transformer load:	max. 600 VA
Power consumption:	< 1 W
Connecting terminals:	for 2x1.5 mm² or 2x2.5 mm² rigid conductor, stripped length 14 mm
External diameter of one cable:	max. 14.5 mm
Angle of detection:	220°
Range:	max. 16 m
Number of levels:	7
Number of zones:	112 with 448 switching segments
Minimum mounting height:	1.7 m
Recommended mounting height:	2.5 m
Sensitivity:	infinitely adjustable
Light sensor:	infinitely adjustable externally, from approx. 3 lux to approx. 1000 lux
Switching duration:	externally adjustable in 6 levels of approx. 1 sec. to approx. 8 min.
Possible settings for sensor head:	
Wall mounting:	9° up, 24° down, 12° left/right, ± 12° axial
Ceiling mounting:	4° up, 29° down, 25° left/right, ± 8.5° axial
Type of protection:	IP 55 at an angle of inclination from 15° to 90°
EC directives:	Low-voltage guideline 2006/95/EC EMC directive 2004/108/EC



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