Panasonic



4460

230 VAC RELAY OUTPUT UNIT

Fire alarm solutions technical description

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1. INTRODUCTION

This document describes the 230 VAC relay output unit, type number 4460.
The document contains information about the product and instructions on how to mount and connect it.

2. ABBREVIATIONS

CIE	Control and indicating equipment
I/O	Input / Output
NC	Normally closed
NO	Normally open

3. SAFETY INSTRUCTIONS

This chapter describes precautions that must be followed to reduce the likelihood of pain, injury and, in the case of fire, property damage.

3.1. PERSONS

3.1.1. ORDINARY PERSON

An ordinary person – as not instructed or skilled – may have access to the location of this equipment.
An ordinary person must not have access to remove the cover of the 4460.
This equipment is not suitable for use in locations where children are likely to be present.

3.1.2. INSTRUCTED PERSON

An instructed person - a person who have been instructed and trained by a skilled person, or who are supervised by a skilled person.
An instructed person must not have access to remove the cover of the 4460.

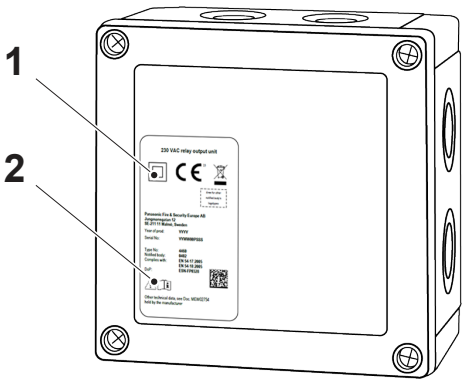
National regulations must be followed.

3.1.3. SKILLED PERSON

A skilled person has the training and experience in the equipment technology, particularly in knowing the various energies and energy magnitudes in the equipment. Skilled persons are expected to use their training to take action for protection from injury from those energies.
Only a skilled person may have access to the 4460 when the cover is removed.
Only a skilled person may connect and deploy the 4460.

National regulations must be followed.

3.2. WARNINGS

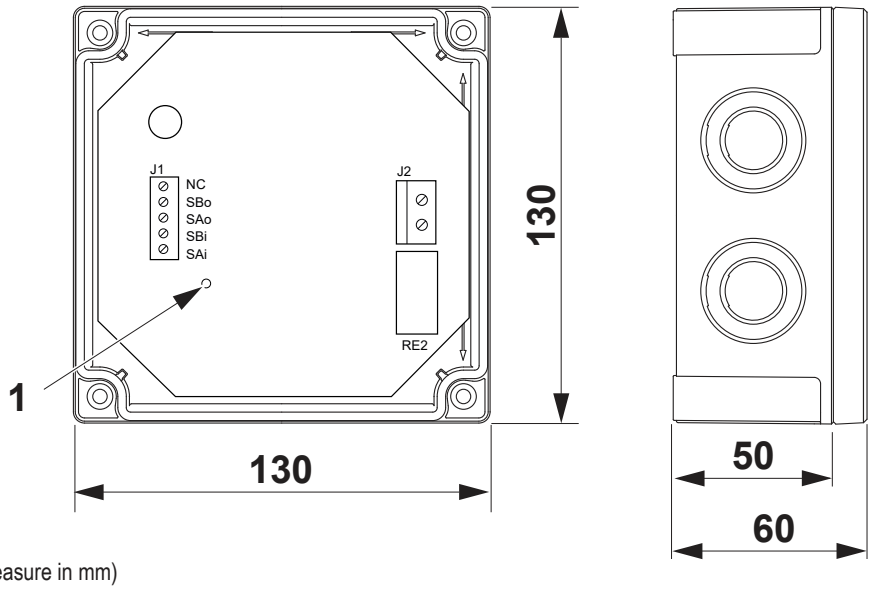


Element	Description	Markings / Instructions
1	Class II equipment without functional earth, reinforced insulation requested	
2	Read the text in the accompanying document	

4. GENERAL DESCRIPTION

The 230 VAC relay output unit has 7 screw terminals for cable connections.
The output is programmed via EBLWin.

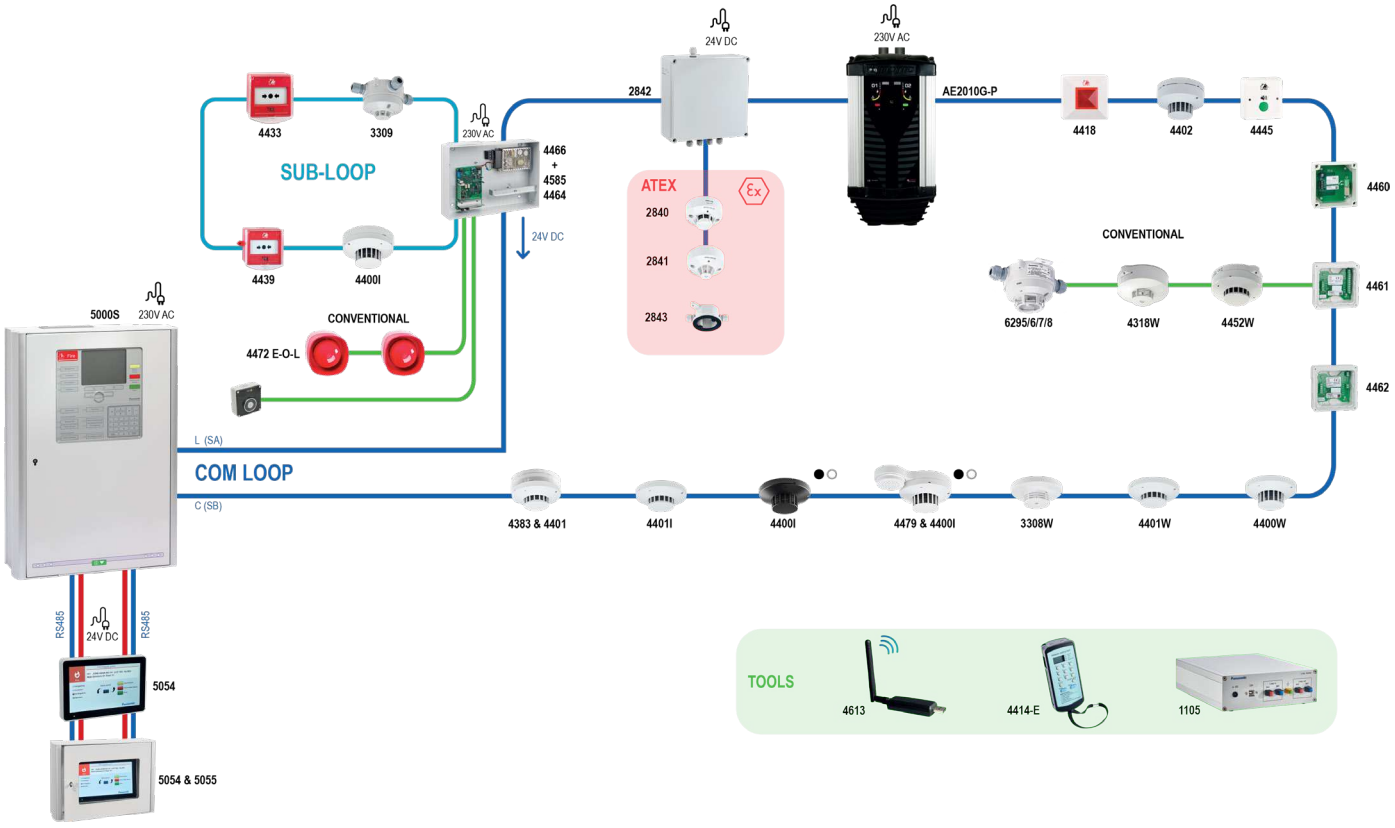
The unit is intended to be surface mounted. The unit is intended for indoor use.



(Measure in mm)

1) LED

THE 4460 CONNECTED TO A CIE, BLOCK DIAGRAM



4.1. LED

The 4460 has a red LED. This LED will only be lit by the function 'Toggle LED' via EBLWin.
For more information, see Planning Instructions for the system.

The function is valid for EBL512 G3 and EBL128 from version 2.4.0

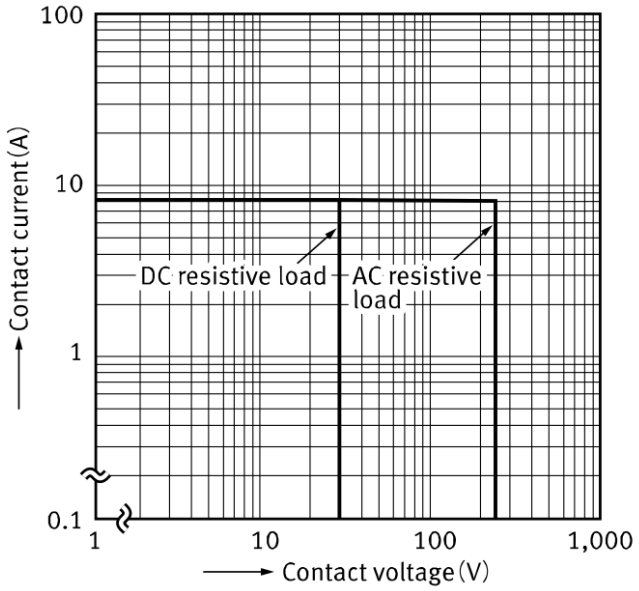
4.2. OUTPUTS

The unit has one programmable relay output: The relay output can be used for different control applications e.g. shutting fire doors in case of fire.

- Relay output (Re0): NC or NO contacts

4.2.1. REFERENCE DATA

Maximum switching capacity (2 Form A).



4.3. SHORT CIRCUIT ISOLATOR

The 4460 has a built-in short circuit isolator that requires no separate COM loop address. Like any other short circuit isolator, it will be given an individual sequence number, either when programmed in EBLWin or via automatic addressing function.

For systems ≤ EBL512 G3 2.2.x: The isolators must be connected consecutively regarding sequence number 00-127, in the COM loop's A-direction.

For systems ≥ EBL512 G3 2.3.X: The sequence numbers can automatically be generated and sorted consecutively in the COM loop's A-direction. Function “Arrange sequence numbers” in EBLWin must be activated. (Tools/Options/EBLWin Settings).

Parameter	Symbol	Value
The maximum line voltage	V_{max}	30 V DC
The nominal line voltage	V_{nom}	24 V DC
The minimum line voltage	V_{min}	12 V DC
The maximum rated continuous current with the switch closed	$I_{C\ max}$	350 mA
The maximum rated switching current on short circuit conditions	$I_{S\ max}$	600 mA
The maximum leakage current with the switch open	$I_{L\ max}$	1.5 mA
The maximum series impedance with the switch closed	$Z_{C\ max}$	120 mΩ
The maximum voltage at which the device isolates (i.e. close to open)	$V_{SO\ max}$	11 V DC
The minimum voltage at which the device isolates (i.e. close to open)	$V_{SO\ min}$	5 V DC
The maximum voltage at which the device will change from open to close.	-	N/A[1]
The minimum voltage at which the device will change from open to close.	-	N/A[1]

For more information on short circuit isolators, see the Planning instructions for EBL512 G3 version 2.3.x or later.

5. SET THE COM LOOP ADDRESS

5.1. AUTO ADRESSING

The 4460 supports automatic addressing via EBLWin.
For more information, see Planning Instructions for the system.

5.2. MANUALL ADDRESSING

If auto addressing is not used, there is a possibility to manually set the address.
Each COM loop unit has to have a unique COM loop address (001-253). The address is set with the Address Setting Tool (4414).

The COM loop address and mode settings have to be done before the unit is connected to the COM loop.

6. SET THE MODE

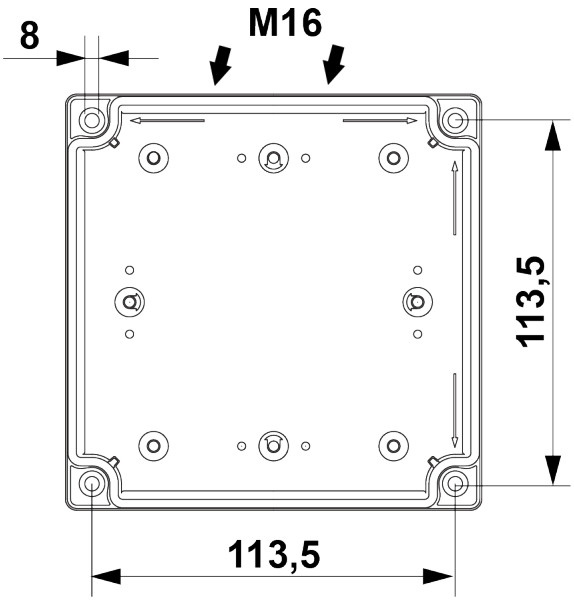
The mode is automatically set to Advanced mode during auto addressing.

6.1. COMPATIBILITY TABLE

	Advanced mode	NORMAL mode	2330 mode	2312 mode
EBL512 G3	V ≥ 3.3	Not used	Not used	Not used
EBL128	Not used	Not used	Not used	Not used
EBL512	Not used	Not used	Not used	Not used
Configured as:	-	-	-	-
Isolator in use:	Yes	-	-	-

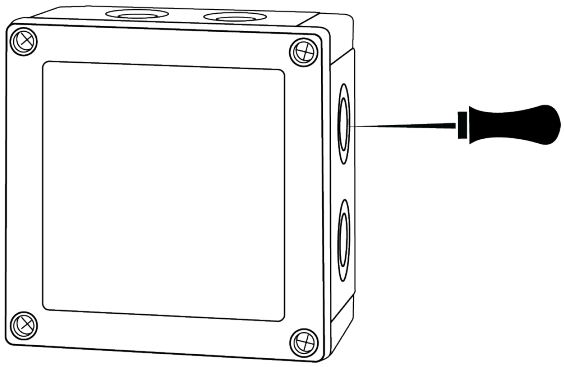
7. MOUNTING

Mount the 4460 on the wall.



(Measure in mm)

a) Cut out the required number of knockouts (M16) and apply the cable entry membranes.
b) Make a small hole in the cable entry membranes with a sharp tool.



c) Mount the connection box on the wall with the four screws, see data below.
d) Push the cable through the inlets. Make the wiring, see 8. INSTALLATION AND WIRING on page 11.
e) Assemble the cover.

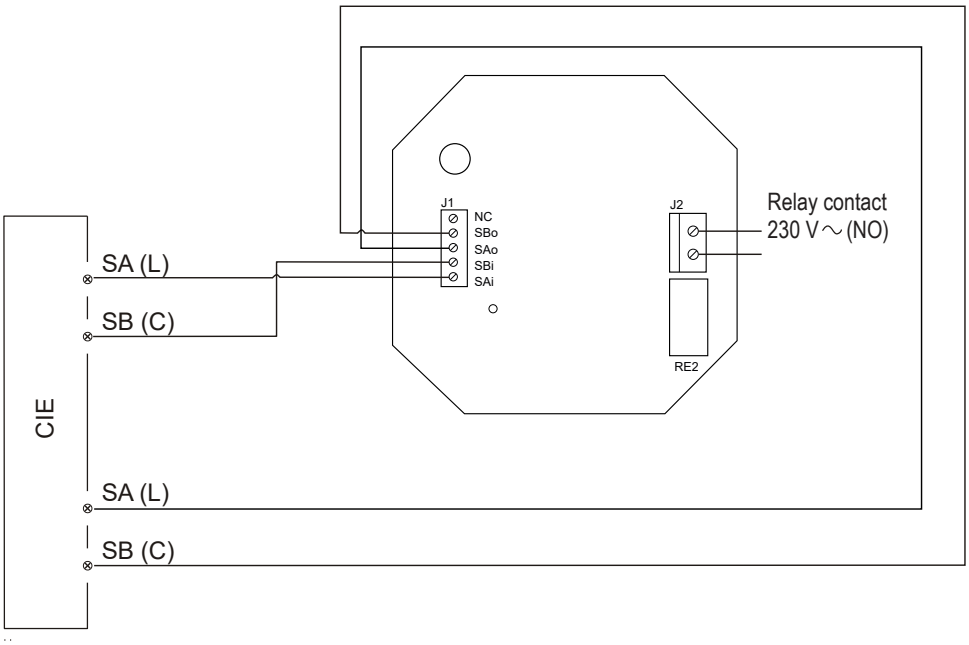
Rounded Head Wood Screw	
Screw Length	min 38 mm
Diameter	4.0 mm
Head Diameter	min 5.0 mm; max 7.0 mm

Appropriate anchor or plug is required for drywalls and concrete/brick walls.

8. INSTALLATION AND WIRING

N.C. (Not Connected) can be used as screen wire termination.

Mains is connected to a disconnect device, max 10 A, intended for the fire alarm CIE only, and marked according to national regulations and codes of practice. Switch of the disconnect device to de-energize the 4460 unit.



	J1	J2
Wire size (Min)	Ø 0.5 mm (0.2 mm²)	Ø 0.5 mm (0.2 mm²), reinforced insulation
Wire size (Max)	Ø 1.7 mm (2.5 mm²)	Ø 2.2 mm (4.0 mm²), reinforced insulation

8.1. ELECTRICAL INTERFACE

Power supply	Via COM loop
Monitored inputs	-
Isolated inputs (optocoupler inputs)	-
Relay outputs	1
General inputs	-

8.2. DISCONNECT DEVICE

Appropriate disconnect device (all-pole mains switch) shall be provided as a part of the building installation.
A disconnect device must be installed (for example Schneider Electric IK 60N B 10A, B-type), outside and close to the 4460. If a disconnect device interrupts the neutral conductor, it shall simultaneously interrupt all phase conductors.
The disconnect device is to be used by service / maintenance personnel.

9. TECHNICAL DATA

All current consumptions are valid by nominal voltage and by 25 °C.

Voltage: Allowed Normal	 12 – 30V DC 24V DC
Current: Quiescent Active	 ≤ 1.7 mA ≤ 1.7 mA
Relay output: Max switching capacity Number of operations	 8A 230 V a.c. (resistive load) 8A 30 V d.c. (resistive load) Min. 100 x 10^3 Min. 50 x 10^3
Address range	001-253
Address setting	Auto addressing (or with address setting tool)
Short circuit isolator	Yes
Internal battery	No
Material	Polycarbonate
Enclosure	Standard Fibox encapsulation. (PCM 125/60 G)
Ambient temperature: Operating Storage	 -10 to +50 °C -20 to +60 °C
Ambient humidity	Maximum 95 % RH (Non condensing)
Flammability	UL 746C 5V
Ingress protection rating	IP 66/67
Size: H x W x D	 130 x 130 x 60 mm
Weight	343 g
Colour	RAL 7035

10. APPROVALS

Applicable directive/ Approval	Applicable standards	Notified body
CPR	EN54-17 (short circuit isolator) EN54-18 (I/O units)	RISE 0402-CPR-C500371 0402-CPR-C500372
EMC	EN 61000-6-3 (Emission) EN 50130-4 (Immunity)	Self declaration RISE (Certification)
LVD	EN IEC 62368-1	Self declaration
RoHS	EN IEC 63000	Self declaration

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Panasonic Fire & Security Europe AB
Jungmansgatan 12
SE-211 11 Malmö
SE
Tel: +46 (0)40 697 70 00