

Manual and instructions



ČERVINKA
CZECH REPUBLIC S.R.O.

Product information

Product Name: Decentralized Fire Protection Equipment (DPZ).

Model line: PA2 AUTOMOTIVE.

Activation voltage from the engine alternator: 14V to 15.5V.

Protected space of the vehicle's diesel / petrol engine: 0.5m³.

Accessories for installation: 4 pcs of square clips, 4 pcs of zip ties, 4 pcs of screws, manual.

1. Function and description of fire extinguishing system PA2 AUTOMOTIVE:

It is a fully automatic disposable flood-type fire extinguishing system containing ecologically clean extinguishing agent registered under the ISO 14520 standard, under the designation FK-5-1-12, developed by the American company 3M for extinguishing the initial fire in the engine compartment of a diesel or petrol vehicle. After starting the vehicle, the PA2 AUTOMOTIVE turns on and activates the fire extinguishing agent within a few minutes. After that, the PA2 AUTOMOTIVE extinguish direct fire. During extinguishing, the extinguishing agent in gaseous form which is then released into the engine compartment, where it removes the flame temperature. The uniqueness of the PA2 AUTOMOTIVE system is the extreme speed of flooding the space with the extinguishing agent in the gaseous form. This device is designed for enclosed and unventilated engine compartments. This effect is achieved by the patented design of the device causing the activation of the extinguishing agent before release into the protected area of the engine in case of fire. The connection to the power supply (car battery) is used to activate the fire extinguishing system. The PA2 AUTOMOTIVE system extinguishes only once and only in direct contact with the flame.

General warning for drivers:

As soon as the driver finds out that his car is showing signs of fire, he must immediately stop the vehicle in a safe place, switch off the engine, leave the vehicle immediately and call the fire service.

2. Usage of fire extinguishing system PA2 AUTOMOTIVE:

The system is designed for an enclosed space of a vehicle engine (diesel or petrol type) with an air volume of up to 0.5 m³.

For areas where there are no aggressive chemicals that could damage the equipment.

For rooms where the operating temperature is between -30 ° C and 70 ° C.

3. System PA2 AUTOMOTIVE it is forbidden to use

- a. In areas where there is a risk of damage from extreme vibrations.
- b. In areas where there is a risk of aggressive chemicals or dust that could damage the equipment.
- c. In areas with permanent sunlight or UV radiation.

4. Installation of fire extinguishing system PA2 AUTOMOTIVE:

The recommended placement of the PA2 AUTOMOTIVE is at the top of the engine compartment or immediately above the hazardous area. The device must be firmly attached to fixed parts of the body or cover so that no direct vibrations are transmitted from the engine. The minimum bending radius of the PA2 AUTOMOTIVE device after installation is 30 cm so that there is no fracture deformation that could prevent the flow of fire extinguishing agent, damage to the "activator" or the device. Avoid contact with sharp edges and other mechanical stress that could damage the device. Avoid contact with hot or heat producing components (exhaust pipes, turbo) above 60 ° C. Do not install in places with permanent UV radiation. PA2 AUTOMOTIVE should not be directly cooled by the fan.

5. Prescribed mounting of the fire extinguishing system PA2 AUTOMOTIVE:

Before the installation, make sure that the car is switched off and secured against rolling away.

Install the PA2 AUTOMOTIVE with its wire facing the car battery.

It is necessary to use the enclosed plastic clips or zip ties with heat resistance up to 90 ° C for fastening.

Do not deform the PA2 AUTOMOTIVE by tying it too much.

PA2 AUTOMOTIVE can only be installed in the temperature range from 0 ° C to +50 ° C.

6. Electrical connection of the fire extinguishing system PA2 AUTOMOTIVE:

- a. Before connecting the PA2 AUTOMOTIVE wires to the car battery, make sure that the voltage indicated on the PA2 AUTOMOTIVE label corresponds to the voltage of your car battery and the alternator.
- b. Then connect the PA2 AUTOMOTIVE wires to the battery with the correct poles - PLUS to PLUS and MINUS to MINUS.
- c. Twist the excess wire length and tie it to the battery. The length of the wire must allow full bonnet opening.
- d. When closing and opening the bonnet, make sure that the wire is not pinched or damaged.
- e. Also, make sure that the wire is always positioned so that it does not come into contact with rotating engine parts or belts.



7. Functionality check of the fire extinguishing system PA2 AUTOMOTIVE:

The extinguishing agent in the system is only checked by checking the weight of the device, which must correspond with the value stated on the PA2 AUTOMOTIVE label with a tolerance of $\pm 5\%$. Checking the proper functionality of the "activator" is possible by touch after at least 15 minutes of operation, when the device must emit heat. When checking the electrical supply system and its correct operation, the LED must light up when the engine is running.

8. How to find out possible disorders of the fire extinguishing system PA2 AUTOMOTIVE:

- a.** PA2 AUTOMOTIVE is still cold after 15 minutes, even if the LED - is lit.
- b.** Torn cable from the extinguishing profile.
- c.** Damaged activator within the profile.
- d.** Obvious mechanical or other damages to the PA2 AUTOMOTIVE.

9. Storage of the fire extinguishing system PA2 AUTOMOTIVE:

Store PA2 AUTOMOTIVE in such a way that there is no permanent deformation of the material. Do not expose PA2 AUTOMOTIVE to permanent UV radiation. The prescribed storage temperature is from 0 ° C to 38 ° C.

10. Health and ecological characteristics of the extinguishing agent:

FK-5-1-12 is a fire extinguishing agent with zero impact on ozone depletion, it is ecological, non-toxic, non-corrosive and non-conductive. It is not recommended to be in direct contact with the fire extinguishing agent during the presence of fire extinguishing or in a room where a fire has broken out, as this may cause injury.

Description of first aid:

If inhaled: Go to a fresh air. Look for medical help if you are concerned. After skin contact: Wash with soap and water. Look for medical help if problems occur. Eye contact: Flush eyes with plenty of drinking water. Remove contact lenses, if present and if easy to do so. Look for medical help if problems occur. For other problems: Rinse mouth. Look for medical help if you feel unwell.

11. Removal instructions:

Methods used in waste management in case of presence of extinguishing agent.

Dispose of at an approved industrial waste site. Disposal alternative - incinerate in an approved waste incinerator designated for this purpose. For complete disposal, we recommend using additional fuel during combustion. Combustion products will contain HF. The incinerator must be able to handle halogenated materials.

12. Other informations:

The instructions in this manual are compiled on the basis of our knowledge and experience so that optimal results are achieved when using the product. We do not accept any liability for damage caused by incorrect product selection or incorrect use. Keep out of reach of children. This data sheet is the first edition; the manufacturer reserves the right to make subsequent changes.

13. Complaints are not justified in cases where there is a defect or damage by:

- a.** Improper use of the product contrary to the instructions in the product manual.
- b.** Improper installation or other user misconduct.
- c.** Electrical overvoltage or polarity reversal of the PA2 AUTOMOTIVE supply.
- d.** By using PA2 AUTOMOTIVE in conditions prohibited by the manufacturer.
- e.** The goods have been damaged by excessive mechanical or thermal stress.
- f.** By performing an unqualified intervention or by changing parameters (coatings, bending, etc.), if a defect has arisen as a result of this adjustment.
- g.** If the item is worn out by its normal use.
- h.** Natural disaster, or if seals have been damaged or removed, if the product is sealed.
- i.** If the submitted warranty list shows obvious signs of changes in the data or if the product has a different serial number.

14. Defect liability and warranty period:

The manufacturer is responsible for:

- a.** The goods have a specified quality, size and weight.
- b.** The goods are free of defects and corresponds to the applicable technical provisions.
- c.** The buyer may request the delivery of a new item without defects only if it is not disproportionate due to the nature of the defect. If the defect concerns only a part of the item, the buyer can only request a replacement of the part. However, if it is disproportionate due to the nature of the defect, especially if the defect can be removed without undue delay, the buyer has the right to free removal of the defect (see §2169 of Act No. 89/2012 Coll., Civil Code).
- d.** **The warranty period for the PA2 AUTOMOTIVE is 2 years.**