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УП 001

Добровольная сертификация

POWDER FIRE EXTINGUISHING MODULE
MPP (N)-0.65-I-GE-U2
Passport
Manual instructions

1 PURPOSE

1.1 Powder fire extinguishing module MPP(N)-0.65-I-GE-U2 (hereinafter referred to as the MPP) is intended for automatic smothering fire, Class A (solids), B (liquids), C (gases) and E (electric equipment under voltage regardless of the breakdown voltage of fire extinguishing powder).

1.2 The MPP is not designed to extinguish the ignition of substances that can burn without air access.

1.3 The MPP is intended to extinguish both the local and volume fire in the room.

1.4 The MPP is made in climatic version U, the Category of location 2, GOST 15150, for operating at relative humidity 95%. The MPP can be made in normal version with operating temperatures of minus 50°C to plus 50°C or in special version at operating temperatures of minus 60°C to plus 90°C.

1.5 The fire extinguishing powder is ejected by the gas generated with a cold gas source CGS-0.65(M)-01 SIAB 066614.020.000 TU.

1.6 The MPP is a reused-product.

1.7 Examples of the MPP marking (model) records when ordered:

- MPP (N)-0.65-I-GE-U2 TU 4854-011-54572789-06 in normal version at temperatures of minus 50°C to plus 50°C;
- MPP (N-T)-0.65-I-GE-U2 TU 4854-011-54572789-06 in special version at operating temperatures of minus 60°C to plus 90°C.

2 TECHNICAL CHARACTERISTICS

2.1 Technical characteristics of the MPP are given in Table 1.

Table 1

Name	Value
1 Case capacity, lit	$0.65^{+0.07}$
2 Dimension, mm, not more than: - height - length	 130 230
3 Total weight of the MPP, kg, not more than	3
4 Fire extinguishing powder ISTO-1 weight, TU 2149-001-54572789-00, kg	$0.49^{+0.05}$
5 MPP fast action (time from the moment of sending impulse to a triggering element of the MPP to the moment of ejecting extinguishing powder out of the module, s	of 3 to 8
6 Operating time (time of ejecting extinguishing powder), s, not more than	1

Table 1 to be continued

Name	Value
7 Pressure of membrane rupture, MPa	2.0…2.4
8*) The MPP fire extinguishing ability: 8.1 Surface to be protected (S), Class A, m^2 8.2 Volume to be protected (V), Class A, m^3 8.3 Surface to be protected (S), Class B, m^2 8.4 Volume to be protected (V), Class B, m^3	 1.2 2.4 1.2 1.2
9 Maximum rank of the model fire site, Class B, when extinguishing at an open area or in a room from the height (H) up to 3m	8B**)
10 Circuit characteristics of electric triggering unit: - safe current of testing circuit, A, not more than - operating current, A, not less than: a) normal version of the MPP b) special version of the MPP - power supply unit voltage, V, not less than: a) normal version of the MPP b) special version of the MPP - electric resistance, Ohm	 0.03 0.12 0.15 1.9 2.4 8…16
11 Irregularity coefficient of spraying powder K1 (NPB 88-2001)	1.0

NOTES:

*) – fire extinguishing ability has been validated in the chamber with a base of 0.6×2.0 m and 2.0m high for fires, Class A and Class B, on the protected surface, and base of 0.6×1.0m and 2.0m high for fires, Class B, in the volume protected.

**) – according to NPB 67-98 model site, rank 8B, is the surface of burning petrol (benzine) as a circle 0.56m in diameter having the surface area 0.25m^2.

3 COMPLETENESS OF SET

3.1 The MPP set to be supplied consists of:
a) the module MPP TU 4854-011-54572789-06 –1 item;
b) Passport and Manual instructions - 1 copy.

4 DESIGN AND PRINCIPLE OF OPERATION

4.1 The MPP design

4.1.1 The MPP (see Figure 1) consists of a case **1** where fire extinguishing powder (OP) **2** and cold gas source (CGS) **3** with electric triggering element **4** are placed. In the front part of the case there is a nozzle-sprayer **5**, the output hole of it is closed by membrane **6**. The module has grounding clamp **7**.

The MPP case side is fitted with support **8** to fasten to the bearing surface (wall, ceiling, floor, etc.).

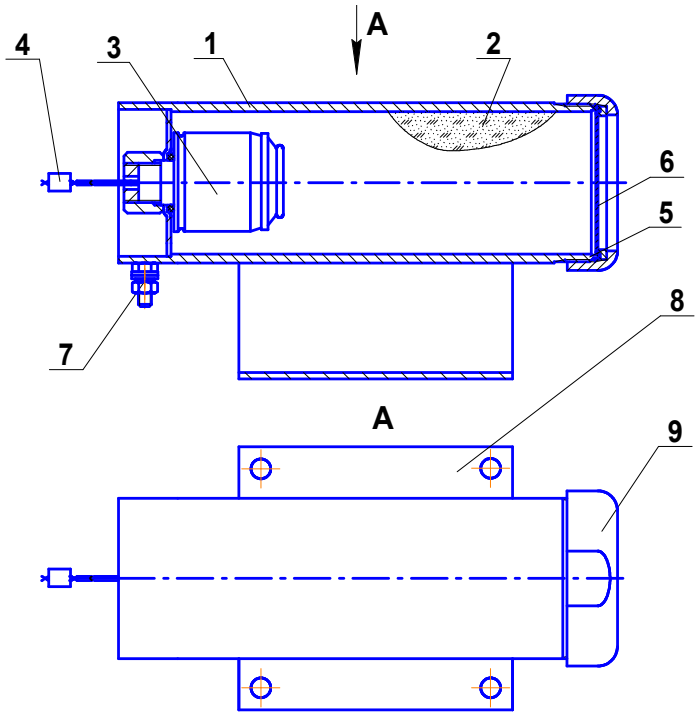

Figure 1

4.1.2 The MPP actuates with the help of current impulse that can be generated by:

- receiving/control, fire alarm, and safeguard devices;
- manual start button;
- self-contained signaling/triggering devices (for example, signaling/triggering independent automatic device for fire extinguishing setups USPAA-1 TU 4371-032-00226827-99, signaling/triggering device USP-101 TU 4371-004-21326303-96).

4.2 Operation

4.2.1 After sending electric pulse to the outputs of electric triggering unit **4,** the CGS **3** generates gas which makes OP **2** loose and creates pressure inside the MPP case to rupture membrane **6** and eject through nozzle-sprayer **5** the jet of OP into the zone of burning.

5 SAFETY MEASURES

5.1 The staff who was allowed to operate the MPP should study this Passport and observe its requirements.

5.2 It is not allowed:

- keeping the MPP near heat sources;
- effecting rainfalls, direct sunlight, aggressive media, and moisture on the MPP;
- shocking the case and the CGS;
- dropping from the height more than 2 m;
- dismantling the MPP, except for maintenance work according to Section 7 of the present Passport;
- operating the MPP with damaged case (dents, cracks, through holes).

5.3 Before connecting the module, the output ends of the triggering unit should be closed by twisting not less than twice and sealed. Connect the MPP only after its grounding. The outputs of the triggering unit of the normal version MPP should be placed separately into fluoroplastic tubes with inner diameter 2…5 mm. Electric safety while assembling the MPP should be provided by meeting the requirements PUE, PTE, PTB and PZSE.

5.4 Loading, reloading, and technical maintenance should be carried out in the rooms specially equipped and designed for it at the MPP factory-manufacturer or stations of maintenance having the license of the State fire fighting service.

5.5 After detecting the module defects (dents, cracks, through holes) during the operation or after its service life, the module should be sent to the factory-manufacturer for utilization.

5.6 While operating the module is fire- and explosion-proof.

5.7 Fire extinguishing powder has no harmful effect on the body and clothes of people, does not cause damage to property and is easy-to-remove. Extinguishing powder waste utilization should be made according to the instruction: Utilization and Regeneration of Fire Extinguishing Powders M:VNIIPO, 1988.

5.8 The bearing construction, the MPP is fastened to, should sustain the impulse load from the module kick at the moment of OP ejecting equal to 1800N.

6 PREPARATION OF THE MPP TO OPERATION, LAYOUT AND MOUNTING

6.1 Unpack the MPP, and examine the integrity of case and membrane.

6.2 Fasten the MPP on the bearing surface (wall, ceiling, and floor) in any place of the volume to be protected. The MPP orientation in the volume protected can be quite different: from the horizontal position to vertical one with nozzle-sprayer down. The holes locations to fasten the MPP are shown in Figure 2.

6.3 Calculate the necessary number of modules in the volumes protected in accordance with Section 8 NPB 88-2001.

6.4 While protecting separate surface parts, i.e. at local protection in rooms or under shelter at the height of installation (H) to 3 m, the local surface area equals 0.25m^2 and is a circle 0.56 m in diameter.

6.5 The configuration of powder spraying and the area image, where smothering is achieved, are given in Figure 3 and in Table 2.

ANNEX A
(obligatory)

Table A.1 - Information about reloading, recertification

Date	Work to do	Executive (company, name)	Signature and company stamp

The alterations not given in the present passport and not affecting the principal technical characteristics, dimension and connecting sizes can be introduced into the module design.

10 CERTIFICATE OF ACCEPTANCE AND SALE

The fire extinguishing module

☐ MPP(N)-0.65-I-GE-U2 ☐ MPP(N-T)-0.65-I-GE-U2

(tick off the necessary)

corresponds to the requirements of TU 4854-011-54572789-06 and is considered to be fit for use.

Batch No _____

Manufacturing date _____
(month, year)

Signature and Inspector stamp _____

Sold _____
(name of the Seller)

Sale date _____

Shop stamp

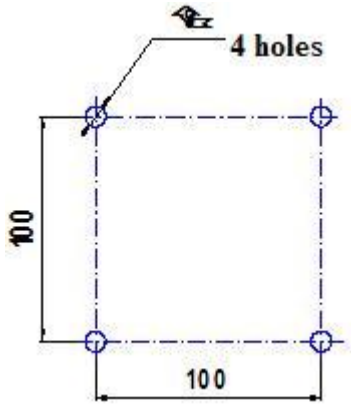

Figure 2

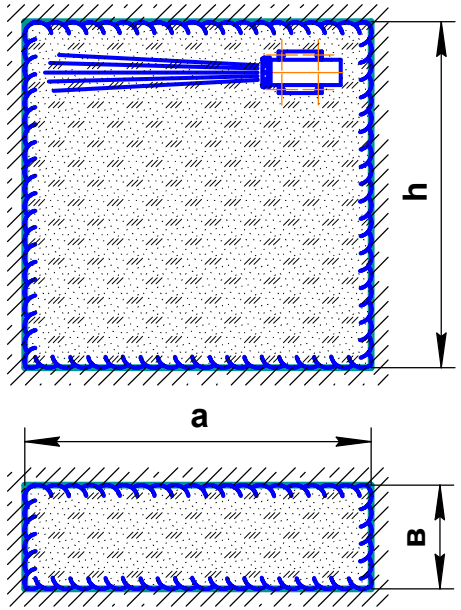

Figure 3

Table 2

Parameters	Class A	Class B	
S, m²	1.2	1.2	-
V, m³	2.4	1.2	1.2
a, m	2.0	2.0	1.0
в, m	0.6	0.6	0.6
h, m	2.0	1.0	2.0

7 MAINTENANCE

7.1 Special technical maintenance within the stated service life is not required. Examine the integrity of the disk (membrane) closing the MPP nozzle-sprayer and the MPP grounding available **once a quarter**. If the disk (membrane) is not intact (damage, holes of puncture, cracks), replace the module.

7.2 Reloading after operating the MPP should be carried out by the MPP factory-manufacturer or at special stations for reloading powder fire extinguishers.

7.3 On reloading and assembling the MPP after its operation, it is necessary to replace the CGS **3** (Figure 1) CGS-0.65(M)-01 CIAB 066614.020.000 TU, fill in the MPP case with fire extinguishing powder and place the membrane **6** (Figure 1) made according to the drawing (Figure 4), Sheet АМцН2-

0.5 GOST 21631-76. After placing the membrane, tighten the nut **9** (Figure 1) under load (150±10) N·m.

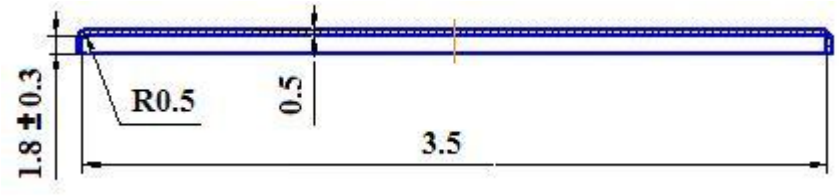

Figure 4

7.4 Record the tests and reloading made in the Passport for MPP (See Annex A).

8 STORAGE AND TRANSPORTATION

8.1 The MPP transportation and storage conditions should meet the requirements of OG-4 GOST 15150-69.

8.2 The MPP transportation in the factory packing at temperatures of minus 50°C to plus 50°C is allowed by all kinds of transport according to the rules of transporting the goods by this kind of transport and taking into account transport conditions – harsh environment (G), GOST 23170-78.

8.3 When stored and transported the MPP, conditions preventing them from mechanical damage, direct sunlight, rainfalls and aggressive media should be provided.

9 WARRANTY

9.1 The factory-manufacturer guarantees the correspondence of the MPP to the requirements of technical specification if the Customer observes operation, transportation and storage conditions.

9.2 Service life is stated to be 10 years for MPP(N)-0.65-I-GE-U2, 5 years for MPP(N-T)-0.65-I-GE-U2 and is estimated from the date of accepting the MPP by Quality Department of the factory-manufacturer.

9.3 Guaranteed MPP service life is stated from the date of the MPP sale is 2 years for the MPP(N)-0.65-I-GE-U2 and 1 year for the MPP(N-T)-0.65-I-GE-U2.

9.4 The factory-manufacturer is not responsible for:

- misoperation if the owner does not observe operation rules;
- negligent storage and transportation of the MPP;
- passport loss;
- after performing certification, reloading the MPP under item 7.3 if they were not carried out at the factory-manufacturer;
- expiration of the service life stated from the date of accepting the MPP by Quality Department of the factory-manufacturer.