

BATTERY POWERED ACTIVATOR (BPA)

USER MANUAL



SGS
Siyah Güvenlik Sistemleri

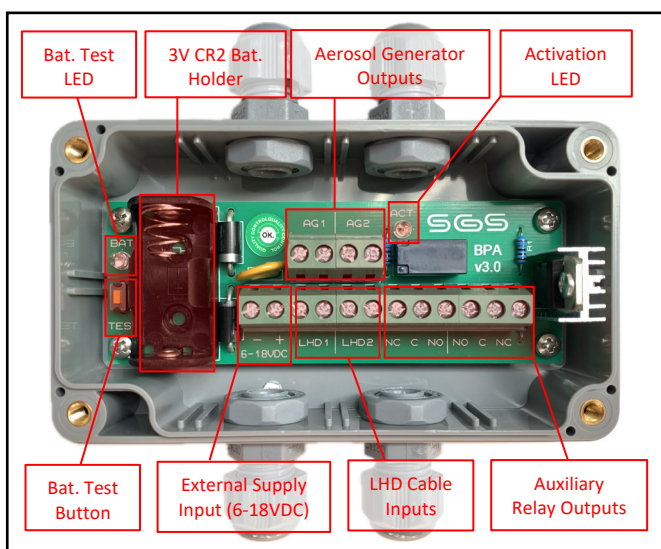
Version 3.0

2024

1. BATTERY POWERED ACTIVATOR (BPA)

BPA v3.0 Battery Powered Activator Module is a small-sized module with a 3V 800mAh capacity internal CR2 lithium battery that can detect ambient temperature with a linear heat detection cable (LHD) in enclosed small volumes and activate up to 2 aerosol fire extinguishing units when the ambient temperature exceeds the alarm threshold of the LHD cable. If desired, it can also be powered by external DC power supply with a voltage output between 6–18V and a current capacity of minimum 2 Amps.

The BPA v3.0 module has a PTC resettable polymer fuse with a cut-off current value of approximately 2 Amps, which limits the excessive current drawn from the extinguishing outputs (AG1 and AG2) of the aerosol fire extinguishing units during activation. The BPA v3.0 module also has an activation (ACT) LED, which indicates that the module has been activated by one of the heat detecting inputs (LHD1 or LHD2), and an internal battery test (BAT TEST) feature, which indicates the status of the 3V CR2 battery on the module.



2. SPECIFICATIONS

Supply Voltage Range	3V DC (with CR2 lithium battery)
	6 – 18V DC (with external power supply)
Aerosol Generator Activation Current	2A nominal (PTC fuse current limiting)
Low Battery Threshold Voltage	2.5V nominal
Relay Output Current Capacity	1A @ 220V AC or 1A @ 60V DC
LHD Cable Length	Up to 10 m (32.8 ft)
Battery Voltage Drop Over Time	180 – 220 mV/year @ 25°C (77°F)
Operating Temperature Range	– 20°C (– 4°F) to + 60°C (140°F)

3. OPERATION

The BPA v3.0 module is designed to activate **up to two** aerosol fire extinguishing units. The aerosol extinguishing units are connected to the AG1 and AG2 connection ports. If only one aerosol extinguishing unit is to be connected, only one of the AG1 or AG2 ports is used. In this case, the other connection port is left empty.

Any of the LHD1 or LHD2 inputs of the BPA v3.0 module or both of them, if necessary, can be used for LHD linear heat detection cable connection. It is recommended to check whether the LHD heat detection cable is damaged and whether there is a short circuit by measuring the resistance between its two core wires before connecting it to the BPA v3.0 module. The two wires of the healthy LHD heat detection cable are in open circuit condition. When the ambient temperature exceeds the alarm threshold value of the LHD cable, the two core wires of the LHD cable are short-circuited by contacting each other with the rising ambient temperature, the activation (ACT) LED on the BPA v3.0 module is illuminated and the aerosol extinguishing units connected to the module's extinguishing outputs (AG1 and AG2) are automatically discharged.

CAUTION! When the LHD linear heat detection cable is exposed to high ambient temperature and becomes short-circuited, the short-circuiting condition of the LHD cable will not be eliminated even if the ambient temperature drops below the alarm threshold of the LHD cable. For this reason, the LHD cable exposed to high ambient temperature should be replaced with a new one.

When the BPA v3.0 module is used with a 3V CR2 battery and a 6 – 18V DC external power supply, as long as the external DC supply is on, the module will be powered by the DC supply and will not consume energy from the battery. When the external DC supply is disabled, the module will start to use 3V CR2 battery on the module.

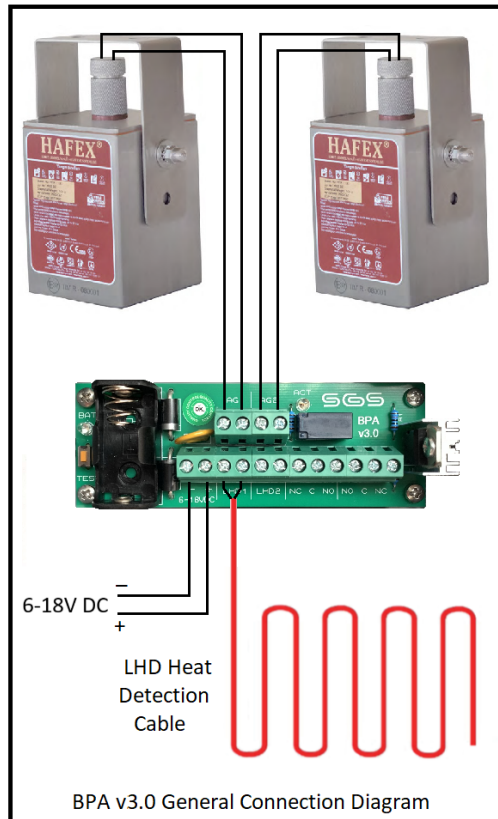
CAUTION! Only 3V CR2 type non-rechargeable battery should be used in BPA v3.0 module. Battery and external DC power supply can be used together in the module or only battery or only external DC supply can be used alone. During installation, attention should be paid to the polarity of battery and external DC power supply.

The BPA v3.0 module has a built-in battery test (BAT TEST) feature that measures the battery charge level if a 3V CR2 battery is inserted into the battery holder. When the battery test button is pressed, if the battery voltage is 2.5V or above, the battery test LED will light up brightly and visibly. If the battery voltage is below 2.5V, the battery test LED will not light up or will light up very dimly/vaguely. If the battery holder is empty or the battery is inserted in the wrong direction, the battery test feature will not work, and the battery test LED will not light up.

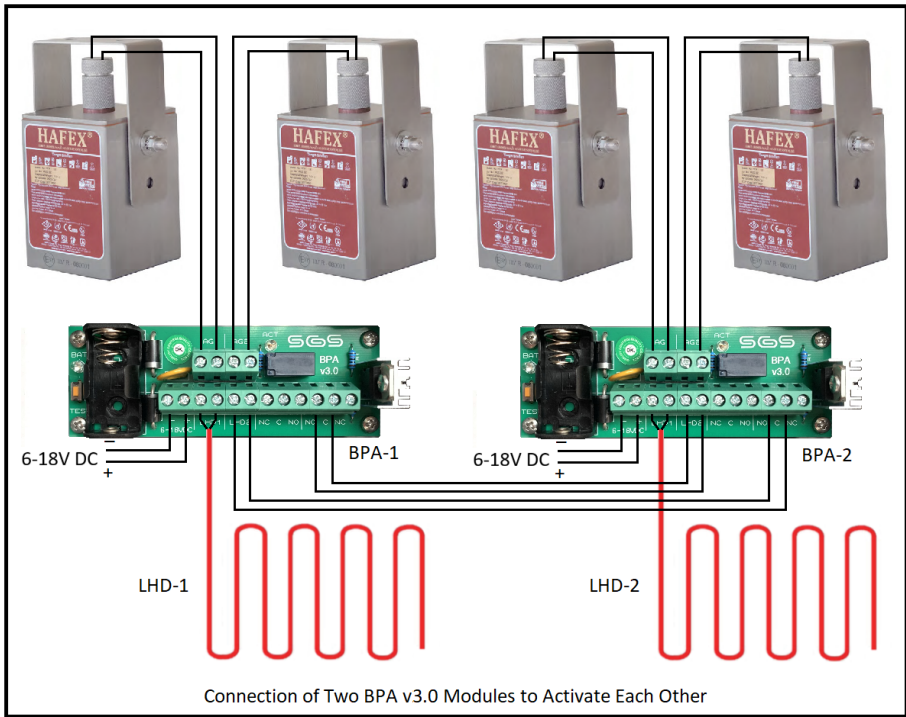
CAUTION! If the battery test LED does not light up or lights up very dimly/vaguely when the battery test button on the module is pressed, replace the battery with a new one. Otherwise, the module will not work properly if external DC power supply is not used or if external DC power supply is disabled.

The BPA v3.0 module has 2 auxiliary volt-free contact outputs, normally open (NO) and normally closed (NC). The common terminals of these 2 auxiliary contact groups are indicated with C on the module. Auxiliary contact outputs have a maximum switching capacity of 220V AC 1A or 60V DC 1A. When the ambient temperature exceeds the alarm threshold of the LHD cable, the auxiliary contacts change their positions. Thus, if desired, a fire detection panel or building management system installed in the environment can be informed that the BPA v3.0 module is activated and the aerosol extinguishers connected to the module are discharged, or warning devices such as sirens and flashers can be activated. In addition, using open contact terminals (NO - C terminals), a BPA v3.0 module can be enabled to activate other modules.

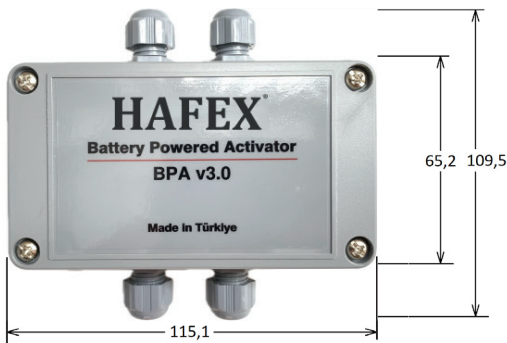
CAUTION! When connecting the aerosol extinguishers and LHD cable to the BPA v3.0 module, care should be taken to ensure that the battery is removed and that the supply voltage is cut off if an external DC supply is used. After connecting the LHD cable to the module, a 3V CR2 battery should be installed and if an external supply is used, it should be activated. Then, if the activation (ACT) LED on the module is not lit, the aerosol extinguisher units should be connected.



Note: The external DC supply connection shown in the diagram is optional.



4. DIMENSIONS



(All dimensions in mm)