



DYCU-3 AEROSOL FIRE EXTINGUISHER CONTROL UNIT

OPERATION MANUAL

DYCU-3 Dynameco Extinguisher Control Unit

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DYCU-3 Dynameco Extinguisher Control Unit

INTRODUCTION

The Dynameco Aerosol Generator canister is a low cost fire suppression module, that comes in 3 sizes:-



Dynameco 200 protects an area of 2 m²
Dynameco 300 protects an area of 3 m²
Dynameco 2000 protects an area of 20 m²

When triggered the canister generated a fine potassium dust that binds with free radicals produced by the fire, causing the physical chain reaction to stop, thus extinguishing the fire.

These canisters are electrically triggered, so need to be connected to a control unit.

The DYCU-3 is a low cost unit designed to trigger 3 canisters from a single module, either by the manual operation of a switch (call point or mushroom push button switch), or by the relay output of an automatic fire detector.

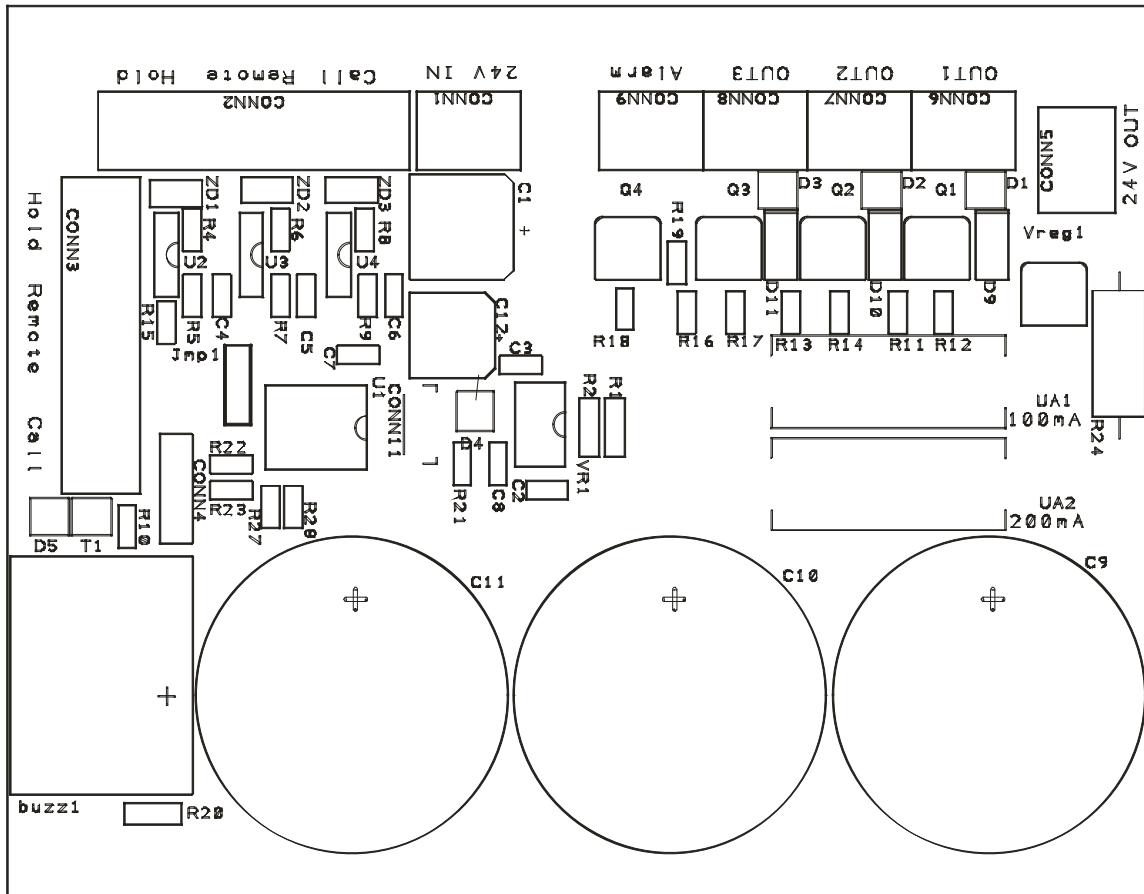
Examples of automatic fire detector include:-

- Smoke detector & relay base
- Flame Detector
- Aspirating smoke detector
- Heat detection cable
- Standard fire alarm panel

As the Canister requires a large current to operate (around 1 Amp), the DYCU-3 triggers the 3 canisters sequentially, so that only a 1 amp PSU is required.

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CONNECTIONS



The DYCU-3 has the following connections:-

LABEL	DESCRIPTION
24V IN	Connection from 24V PSU to run the unit (With battery back up)
OUT1	Connection to first Dynameco Canister
OUT2	Connection to second Dynameco Canister
OUT3	Connection to third Dynameco Canister
ALARM	24V output. Energises when unit triggered
24V OUT	Connection to power external Detector (100mA max)
CALL	Manual Triggering input (eg Call point)
REMOTE	Automatic triggering input (EG flame detector)
HOLD	Extinguishing Hold Input. Stops all triggering signals to canisters

NOTE: The CALL, REMOTE & HOLD signals have 2 connection places. Either connection can be used as these are in parallel. The extra connection is used for linking units together.

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OPERATION.

The DYCU-3 can be triggered in one of 2 ways:-

MANUAL TRIGGERING (CALL CONNECTION)

If a normally open connection to the CALL input closes (EG call point pressed), the unit will wait for about half a second to verify the signal.

It will then operate it`s INTERNAL BUZZER.

It will then operate it`s ALARM output. This can be used to drive a local sounder, or to signal to monitoring equipment.

It will then operate Canister OUTPUT 1. (this will operate the Dynameco canister connected to this output).

After about 0.5 second, it will turn off this output, and then turn on OUTPUT 2. (to trigger a second canister)

After about 0.5 second, it will turn off OUTPUT 2, and then turn on OUTPUT 3. (to trigger a third canister).

After another 0.5 second, the unit will turn off OUTPUT 3. It will continue with it`s internal buzzer operating, and its alarm output operating, until the Triggering signal is reset.

AUTOMATIC TRIGGERING (REMOTE CONNECTION)

For the automatic triggering, there is an option to delay the output signals by 10 seconds. This gives an opportunity to investigate the cause of the alarm and HOLD the system if necessary. This is done by setting jumper 1.

With the jumper OFF there will be no delay, and the operation sequence will be exactly the same as for manual triggering

With the jumper ON there will be a 10 second delay between the unit operating it`s ALARM, and operating canister output 1. The unit then follows the same sequence.

HOLD

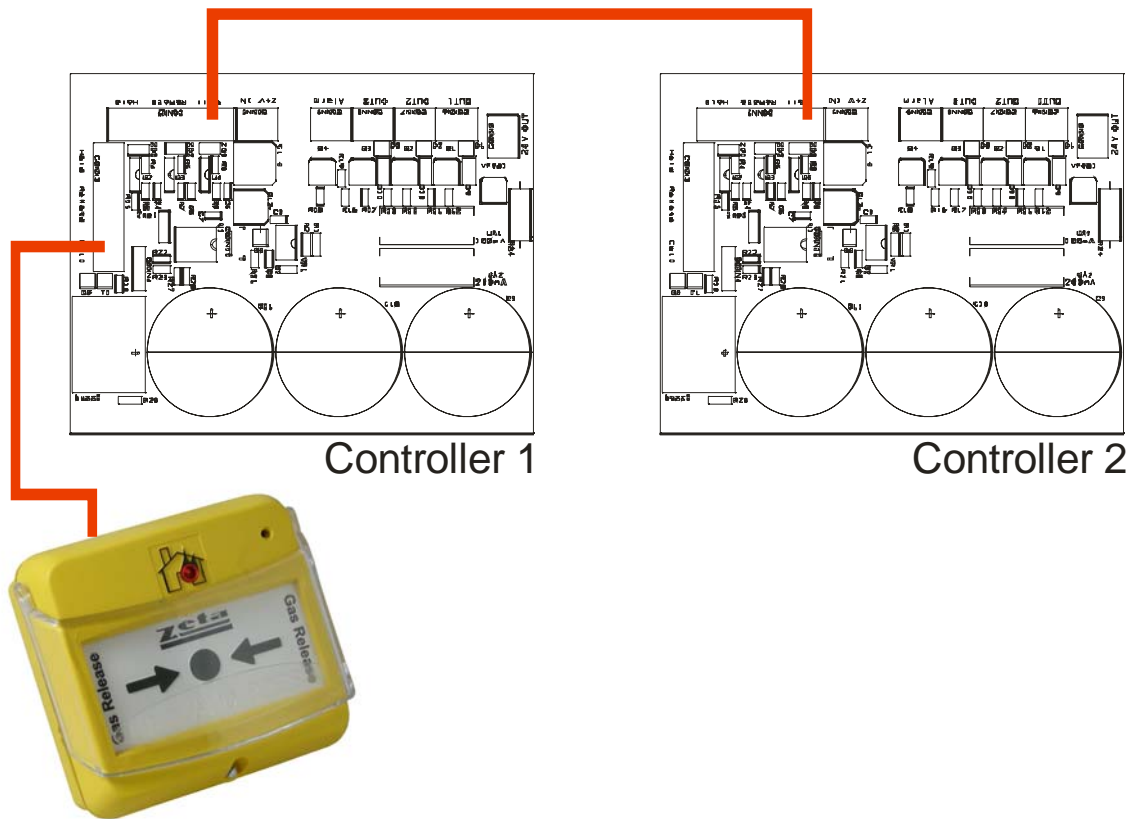
The unit has a hold input. This is used to inhibit the extinguishing outputs from operating. It stops both Automatic & manual Triggering.

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LINKING

The DYCU-3 contains dual connections for each of the 3 input signals (CALL, REMOTE, HOLD)

These allow units to be daisy-chained together. Either 1, 2, or all 3 signals can be linked. Whatever is more appropriate for type of system being designed.



In the above example, the yellow call point would trigger the canisters on both controller 1 & controller 2, but an automatic trigger would only operate canisters on that specific controller.

Note that if the HOLD signal is linked, all extinguishing on the linked system will be halted.

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TECHNICAL INFORMATION

ENCLOSURE

OPERATING TEMPERATURE	0°C to 50°C
MAX HUMIDITY	95% RH Non Condensing
IP RATING	IP43
SIZE	234 x 165 x 80mm
WEIGHT	200g

ELECTRICAL

MODEL	DYCU-3
PART NO	83-005
SUPPLY VOLTAGE	24V DC
POWER UP CURRENT	1A
STANDBY CURRENT	20mA
ACTIVE CURRENT	50mA + 1A for Canister (Sequenced)
INPUTS	MANUAL TRIGGER AUTO- TRIGGER HOLD OUTPUT
OUTPUTS	3 X CANISTER TRIG. AUX 24V ALARM 24V INTERNAL BUZZER LED INDICATION (OPTION)
INTERLINK	MANUAL TRIGGER AUTO- TRIGGER HOLD OUTPUT