

# DC2F1

# Fan Controller

with battery monitor

## NOTICE TO CUSTOMERS

Because the continuity of product life cycle, some fields of this document may differ from the interfaces of product. Please, contact [info@alnet.com.tr](mailto:info@alnet.com.tr) when required

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## INTRODUCTION

The Collhex Control series southerFly DC2F1 is a line of off-the self programmable controllers from ALNET Elektromekanik LTD. for thermal management and fan speed control of DC fans.

It monitors one 4-wire DC fans and generates alarm in the event of a fan failure, over temperature, lower temperature and low battery.



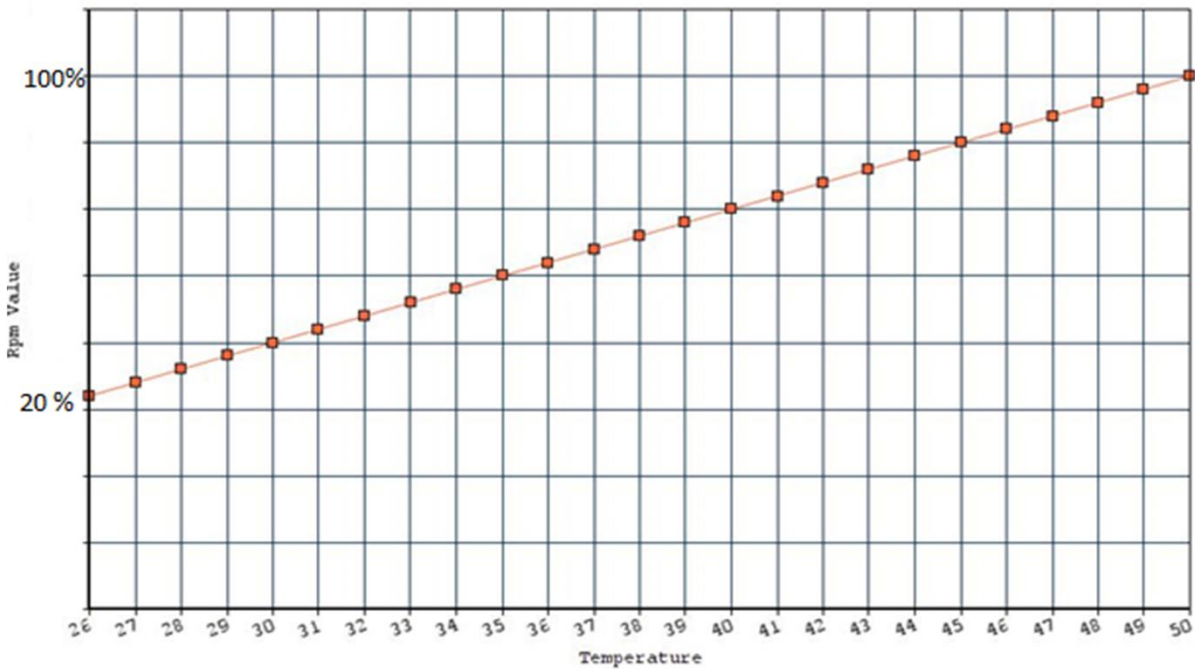
## SPECIFICATIONS

- \* 32-bit High-Performance Microcontrollers
- \* Battery Monitor and Low voltage Cutt-off
- \* Co-ageing battery management
- \* Selected battery indicator
- \* Power & Alarm LEDs with external connections
- \* Isolated Fan and Logic power domains
- \* Fan failure detection and prediction
- \* Board can pass up to 6A continuously to fans
- \* 12V to 65V input voltage range without modifications
- \* 1 Khz PWM signal for 4-wire fan control
- \* NTC temperature sensor
- \* NTC connection check
- \* Low battery check and generate alarm
- \* Accepts one fans
- \* Fans are controlled by using inlet temperature
- \* Over temperature alarm
- \* Predictive and total fan failure detection
- \* Open collector alarm output
- \* Power Shock suppressive

## FAN REGULATION

The fans in the system are regulated by the change on the temperature. The fans run between the minimum and maximum temperature values between Ramp start and Ramp stop configuration. The minimum start rpm (revolution per minute) and maximum rpm values can be specified. Above or below values of this specification is prevented.

### Sample Graphics

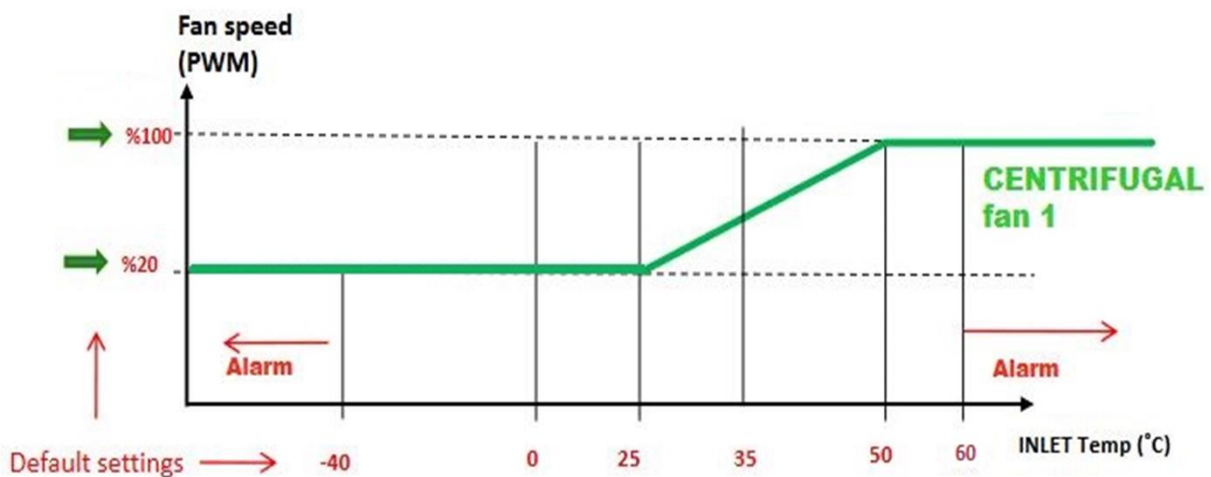


Ramp Start

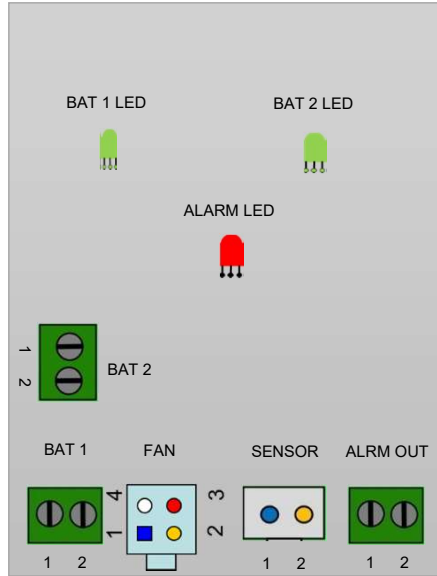
Ramp End

Note: Rpm value depending on fan type

## CONTROLLER ALGORITHM



## CONNECTION LAYOUT



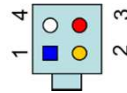
### BAT 1 & BAT 2 Pin Structure

Pin Number	Description
1	: +15 to 56V DC
2	: GND

### SENSOR Pin Structure

Pin Number	Description
1	: NTC 1
2	: NTC 2

### FAN Pin Structure



Pin Number	Description
1	: GND
2	: Pwm Out
3	: Tacho Input
4	: +48 V

### ALR OUT Pin Structure

Pin Number	Description
1	: OPTOCOUPLER (E-)
2	: OPTOCOUPLER (C-)

## ALARM LED MESSAGE AND TROUBLESHOOT

Blinking Time	Description	TROUBLESHOOT
1	: Sensor Error	Check sensor connection or replace to new one
2	: High Temp Alarm	
3	: Low Temp Alarm	
4	: Fan Alarm	Check fan connection
5	: Bat 1 Low Voltage	Re-charge battery
6	: Bat 2 Low Voltage	Re-charge battery
7	: Voltage Cut-off	Re-charge battery