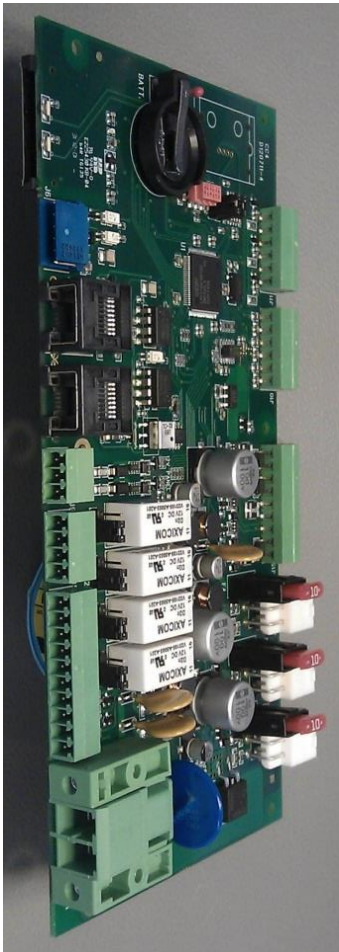


CC4



CC4

TELECOM COOLING CONTROLLER

Dantherm Telecom Cooling Controller CC4 is designed for speed control and monitoring of up to three 48V DC operated fans, control of compressor, heater and damper. CC4 is suitable for control of Combo Cooling units, free cooling units and applications where total heat management is done by several existing climate units whom are supposed to work together and avoid conflicting start-stops.

CC4 has inputs for several temperature sensors and monitoring devices. Temperature control strategy is configurable.

Applications:

- Dantherm Flexibox
- Dantherm combo Cooling

FEATURES AND BENEFITS

- Energy saving control strategy; with fans controlled with unique stable RPM independent of supply voltage fluctuations.
- Energy saving control strategy, by use of free cooling strategy / active cooling strategy.
- Wide Supply voltage range accommodating 40-60VDC
- Supports high power fans up to 10A output. (max two 10A fans)
- Configuration parameters stored in on-board non-volatile memory.
- Configurable digital input/outputs.

- The fan is step less controlled with stable RPM independent of supply voltage fluctuations – resulting in minimal power consumption and prolonged fan life time.
- Wide operating supply voltage: 40-60V DC complies with 48V DC telecom supply voltage range (both – and +).
- Supports high power fans - up to 10A for each fan output (max two 10A fans).
- Reverse polarity protection of controller.
- Inrush current limiter, which allows hot insert.
- Plug connection for alarms, remote temperature sensor and digital inputs for quick and reliable wire termination.
- Galvanic insulated alarm outputs. Insulation voltage is 500V.
- DC power plug with screw terminals, for easy and reliable installation.

- TTL Link serial connection to use with TTL/USB cable for Laptop.
- RS485 serial connection, with ModBus protocol.
- LED for on-site alarm- and operation status observation.
- Easy configuration of customized settings. New configuration to be loaded by SD card.
- LVD Low Voltage Disconnection – In case of low voltage supply – the fans will stop and thereby prolong backup time and battery life time.
- Emergency cooling in case of overheating results in 100% fan speed.

Optional features

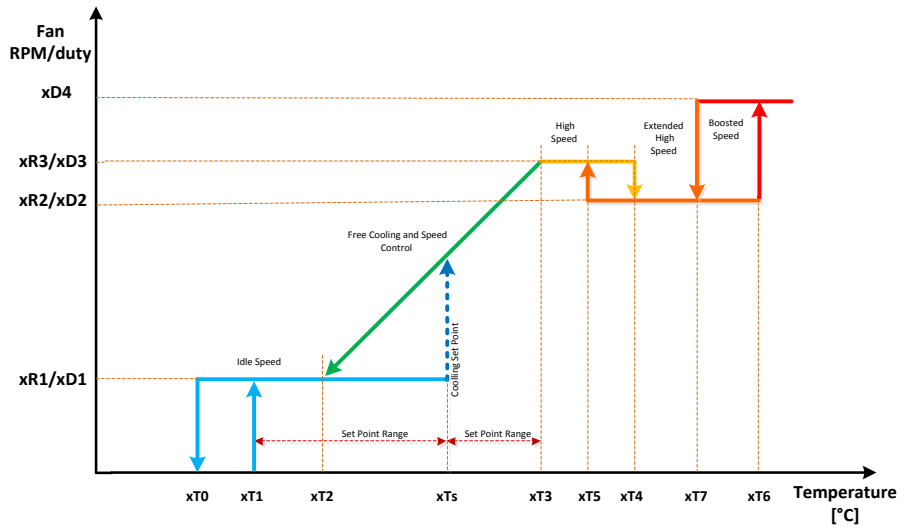
- SD card
- Remote temperature sensor
- Serial TTL/USB adapter.(Standard adapter for use with standard terminal PC software)
- Display. (Monitoring and parameter change)

TECHNICAL DATA
CC4

Version Dantherm Telecom Cooling Controller CC4		
Item number		074620
DC supply voltage range	40-60 V	Phoenix PC 4/ 2-G-7,62
Digital 1,2,3,4,5	For use with dry contact (10mA @ 12V) (1K pull up resistor to 12V)	20020039-C0x1B01LF - Terminal Blocks
Temperature sensor 1,2,3,4	NTC -30 to 85°C (-22 to 185°F) NTC type NTCLE100E3272GB0	20020039-C0x1B01LF - Terminal Blocks
Output		
Fan 1, 2, 3	+, -, T, P (10A)	AMP Mini Universal MATE-N-LOK
Digital Damper int/ext.	0/48V DC 100mA	20020039-C0x1B01LF - Terminal Blocks
Digital AC1 & AC2	Dry contact (500mA/60V)	20020039-C0x1B01LF - Terminal Blocks
Digital AL1 & AL2	Dry contact (500mA/60V)	20020039-C0x1B01LF - Terminal Blocks
Digital Heater, Compr, Cond.	0/48V DC 300mA	20020039-C0x1B01LF - Terminal Blocks
Communication		
Opto-insolated TTL	+, -, TX, RX	AMP - 281698-6
Opto-insolated RS 485	A/B	RJ45 w. shield
Memory		
Onboard EEprom	1M non volatile	Storage of operating parameters.
Mass storage device	Up to 32 G SD Flash	For logging and change of parameters
Environmental		
Temperature range	-40 to 85°C (-40 to 185°F)	
Safety	EN/UL 60950-1	
EMC	EN 61000-6-2:2005 EN 61000-6-3:2007	Electromagnetic compatibility (EMC) – Part 6-2: Generic standards - Immunity for industrial environments EMC Emission (EN 55022 version: 1998+A1:200 +A2:2003_ClassB) Electromagnetic compatibility (EMC) – Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

FAN CONTROL STRATEGY

Refer to configuration table for definition of parameters.
All parameters can be changed to comply with customer settings.



COOLING CONTROL STRATEGY

