

## Superheat controller with management of PWM electronic expansion valve

DIN rail housing, display, 230 VAC power supply, 3 relays, 1 valve output (triac) 24-240 VAC, 1 analogue output, 5 PT1000 inputs, 1 pressure sensor input, 1 0-10 V input, 1 4-20 mA input, 2 digital inputs, bus interface, clock, plug-in terminal blocks. Compatible with all major pulse width modulated electronic expansion valves on the market (e.g. Danfoss AKV).



The DC24DE module is a universal controller that performs measurement, monitoring and control functions for the following applications

- control of cooling units or cold rooms (MT and LT refrigeration) with superheat control using electronic expansion valves,
- compressor control,
- condenser management,
- humidity control,
- management of air conditioning and lighting zones,
- input-output mode.

The module is mounted on DIN rails.

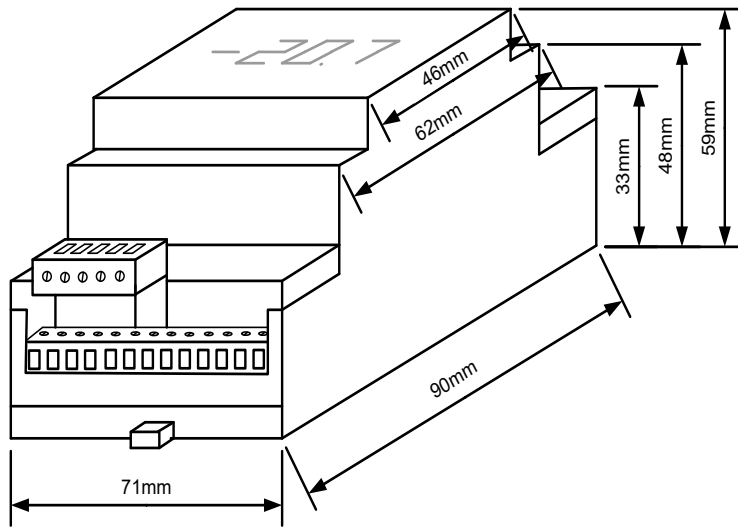
The DC24DE module can be programmed using the Teleswin supervision software or directly via the buttons on the front panel. The integrated display shows the values measured by the connected sensors and is used for programming the parameters.

## APPLICATIONS

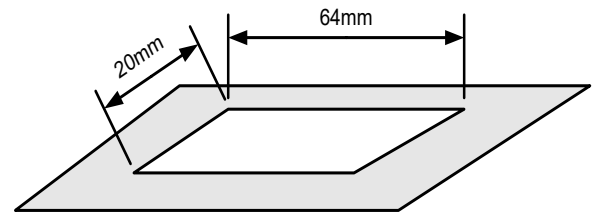
Medium temperature refrigerated units	yes
Low temperature refrigerated units	yes
Management of compressors	yes (up to 12 compressors with 3 extension modules)
Hygrometry	yes
Programmable inputs-outputs	yes
Concentration of gazes	yes
Air-conditioning - cooling/heating	yes
Management of lighting areas	yes

## DIMENSIONS

Module



Cut-out for display



## FEATURES

### Inputs

PT 1000	5 (also compatible with the probes: NTC 10K/25°C, L.243, KTY81)
0-10 V	yes
4-20 mA	yes
Digital	2

### Outputs

Relays	3
TRIAC (24-230 VAC)	1
Analogue	yes

### Others

White display	yes
Power supply	230 VAC
Remote monitoring bus interface	yes
Clock	yes
Electronic expansion valve	yes
Local bus for extensions	yes

## TECHNICAL DATA

### Power supply

Supply voltage 110-250 VAC, 50-60 Hz

Maximum input power 4 W

Protection rating 1

Contamination rating 2

Overvoltage category II

### Conditions of use

Temperature 0-40° C

Humidity 0-80% (without condensation)

Breaking capacity of relays outputs inductive load 6 A 250 VAC, resistive load 10 A 250 VAC

Breaking capacity of triacs outputs inductive load 1A 250 VAC, resistive load 1A 250 VAC

Minimal current of triac output 11 m

Clock – reserve operating margin 4 days

Input 0-10 V range of measurement: 0-10 V

Input 4-20 mA range of measurement : 4-20 mA

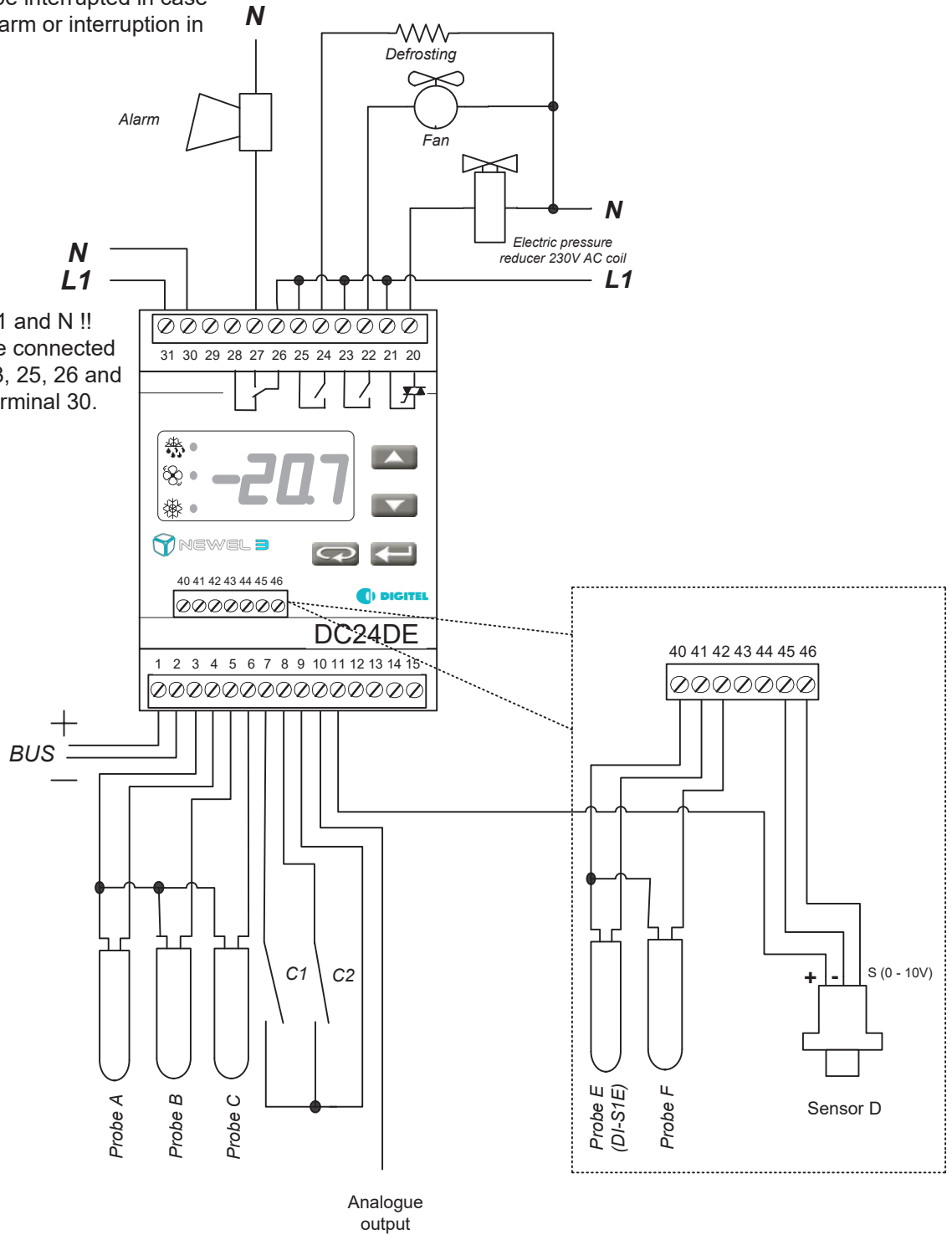
# ASSEMBLY DIAGRAMS

## DC24DE in refrigerated unit control mode

The contact between 26 and 28 will be interrupted in case of an alarm or interruption in supply

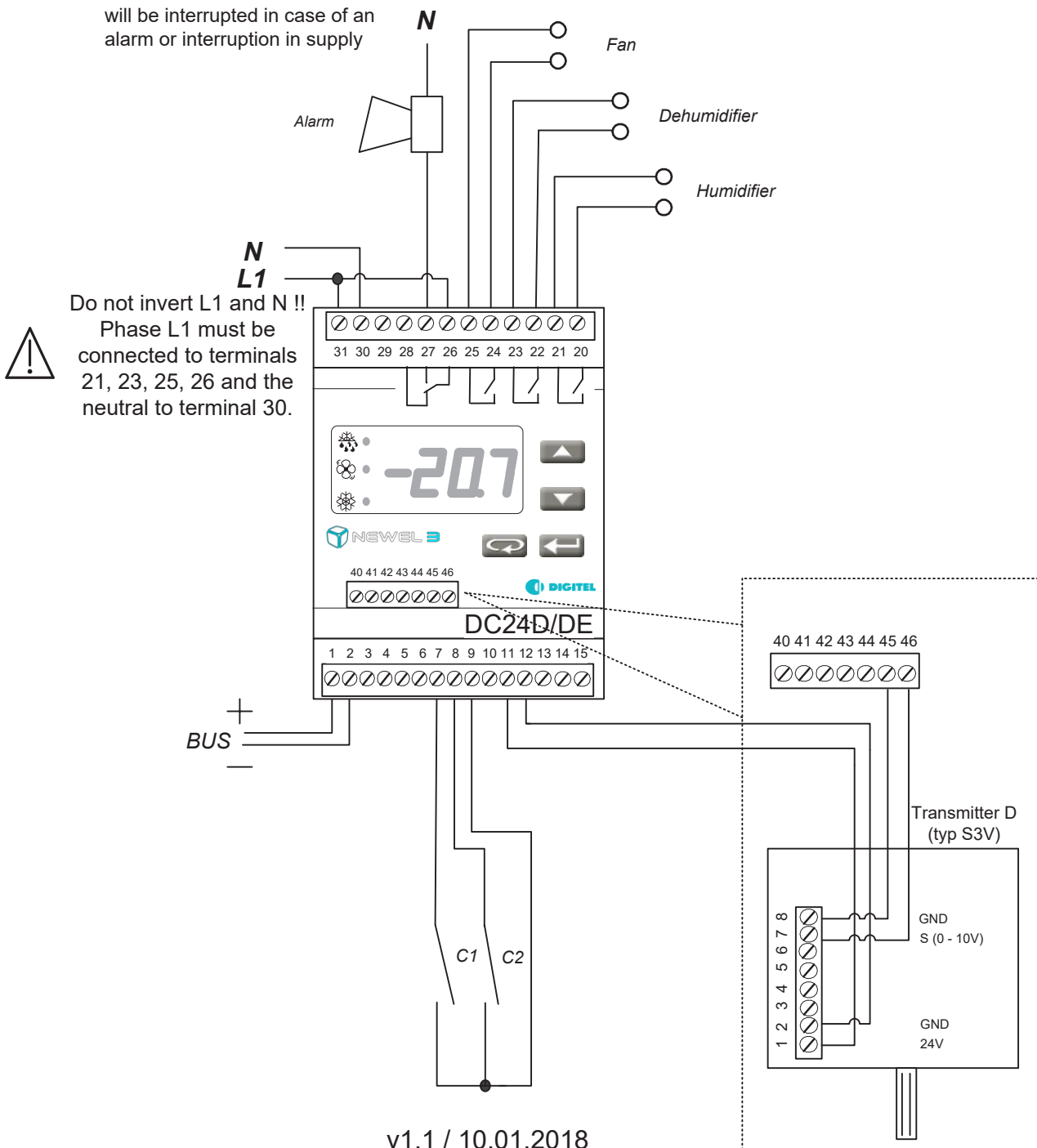


Do not invert L1 and N !!  
Phase L1 must be connected to terminals 21, 23, 25, 26 and the neutral to terminal 30.



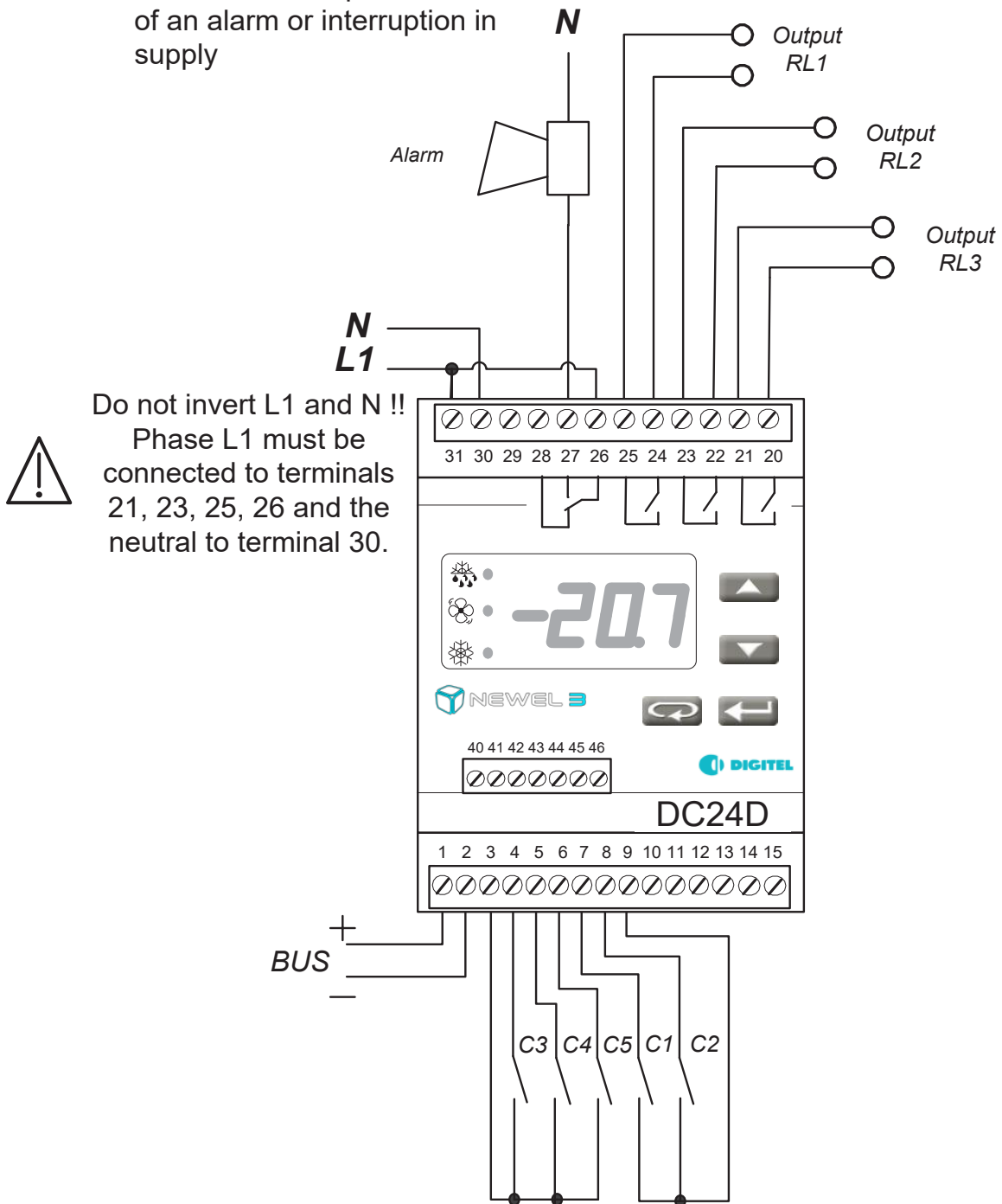
# DC24DE in humidity management mode

The contact between 26 and 28 will be interrupted in case of an alarm or interruption in supply



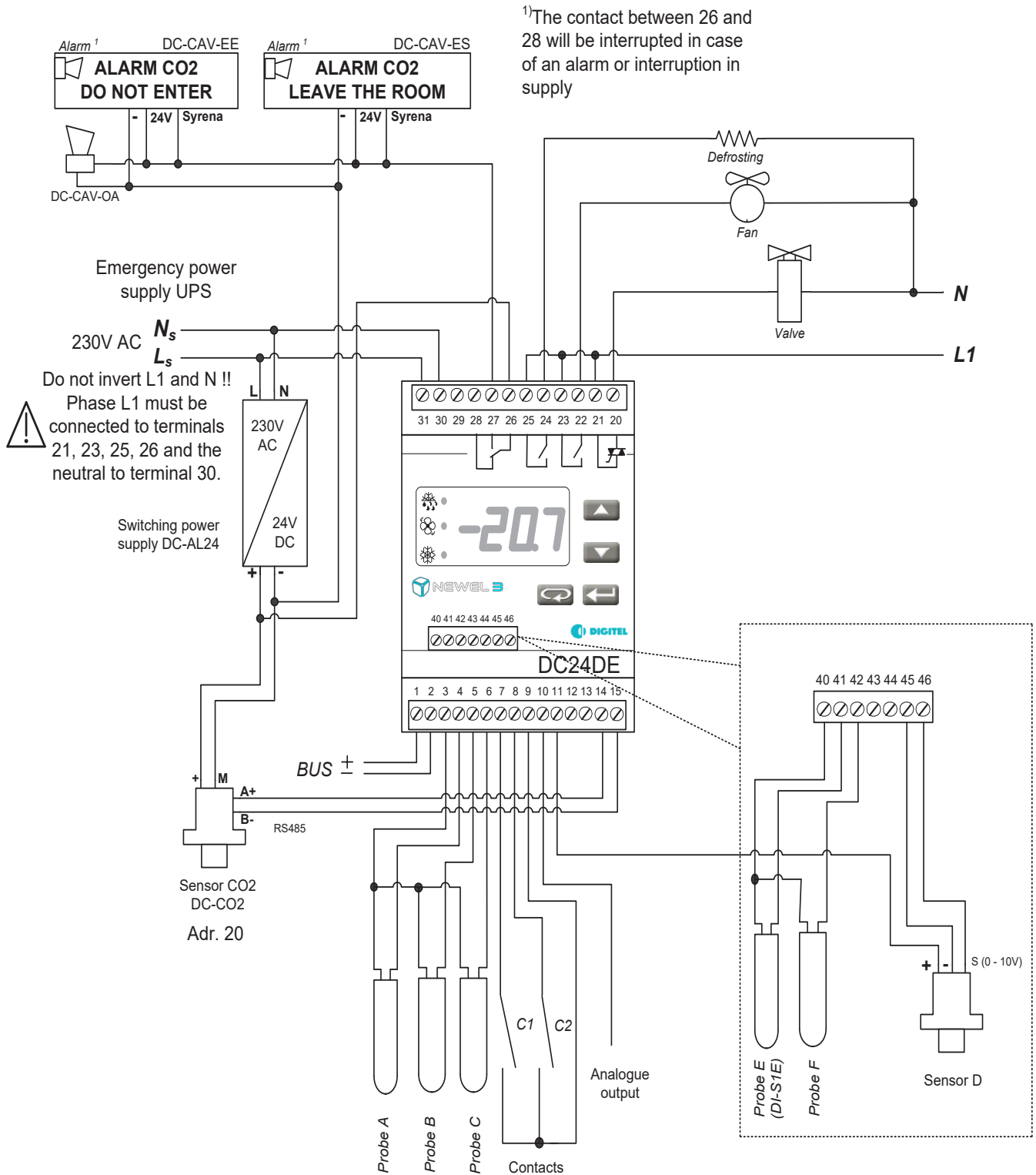
## DC24DE in input/output mode

The contact between 26 and 28 will be interrupted in case of an alarm or interruption in supply

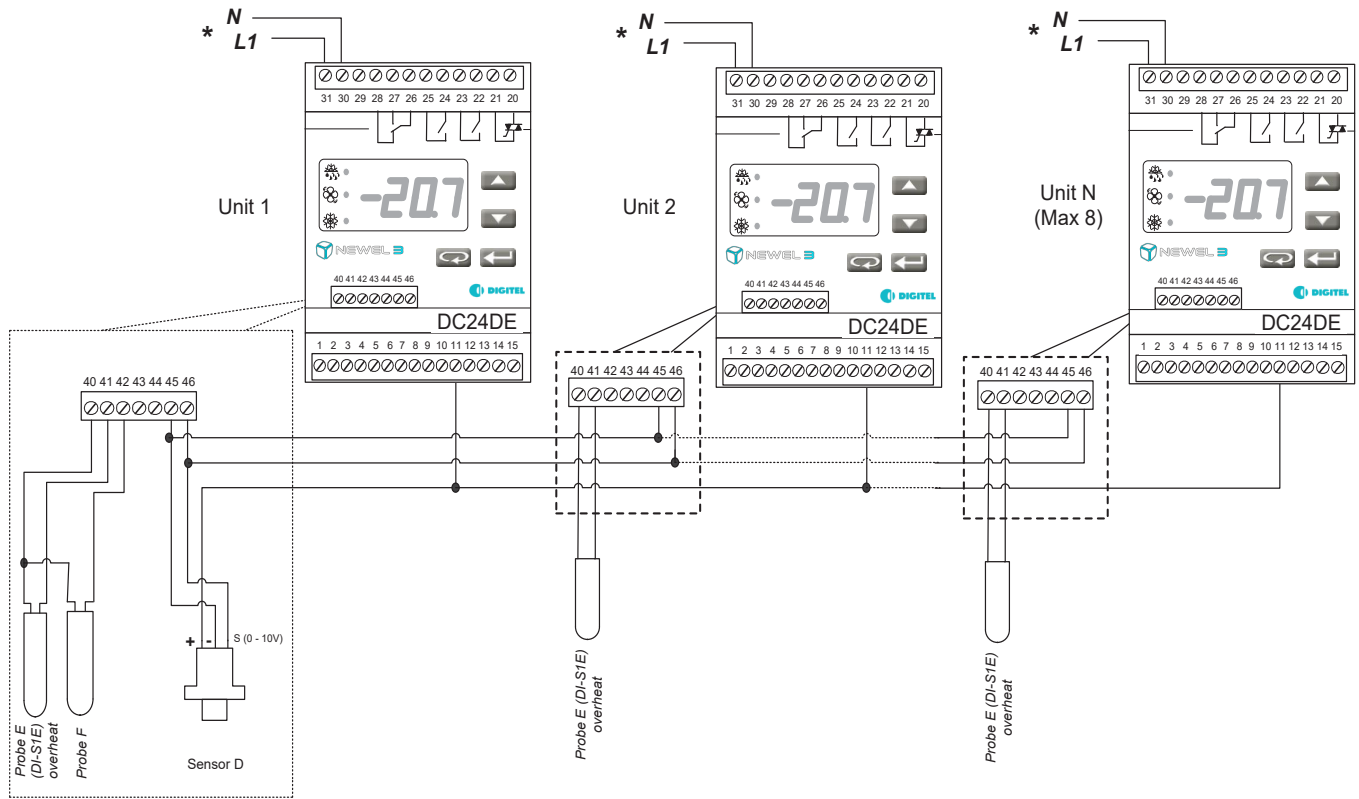



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# DC24DE in cold room control mode and CO2 monitoring



## DC24DE in refrigerated unit control mode - control of several evaporators



\*  Do not invert L1 and N !!  
Phase L1 must be connected to terminals 21, 23, 25, 26 and the neutral to terminal 30.



### About us

Digitel provides high-end control, monitoring and remote management solutions for installations requiring a high degree of performance: refrigeration, heat recovery, controlled atmosphere chamber, growth chamber or special and customized installations.

Digitel SA  
Route de Montheron 12  
1053 Cugy, Suisse

T: +41 21 731 07 60  
E : info@digitel.swiss

[www.digitel.swiss](http://www.digitel.swiss)