

### APPLICATION

The CMS200 is Nexo enabled controller designed for energy management efficiency in sub-zero beer cooler applications. It consists of a Control Display Module (CDM) and a Power Supply Module (PSM) connected by an interface cable.





The CMS200 is available with a remote (RMD) or integrated (IMD) motion detection, depending on the position of motion sensor, to allow flexibility when installing into different types of coolers.

#### CONTROL DISPLAY MODULE (CDM)







IMD Controller option shown

#### LED

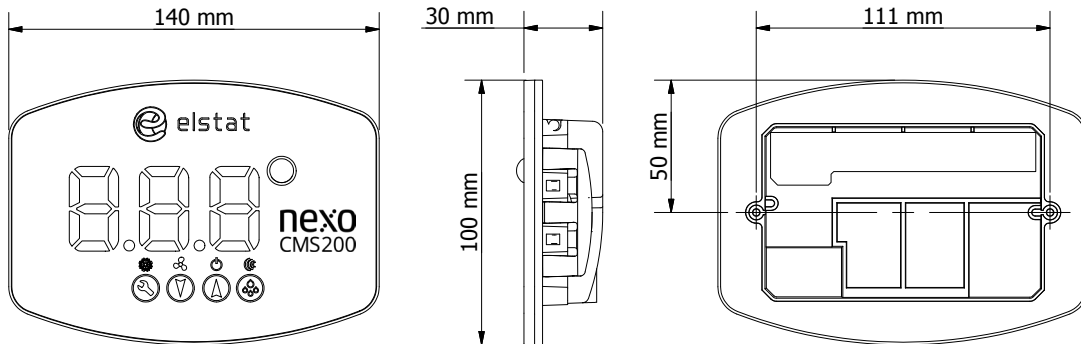
-  Compressor
-  Evaporator fan
-  Saving temperature disable
-  Motion

#### BUTTONS

-  Set
-  Down
-  Up
-  Defrost

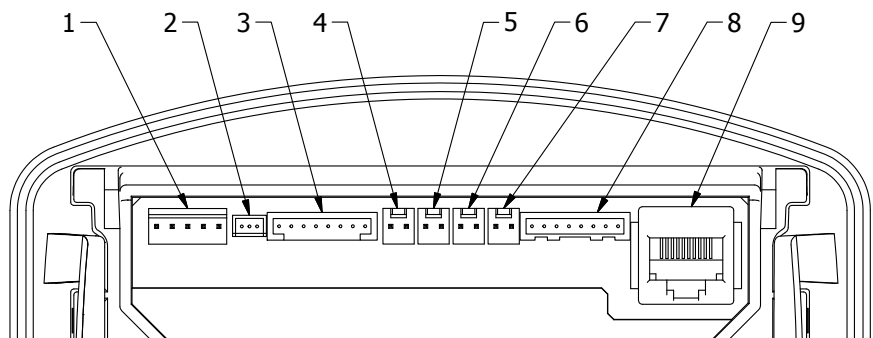
The control display module consists of the user interface with a large 3-digit 7-segment LED display, the temperature sensors and door switch inputs.

#### CDM OVERALL DIMENSIONS

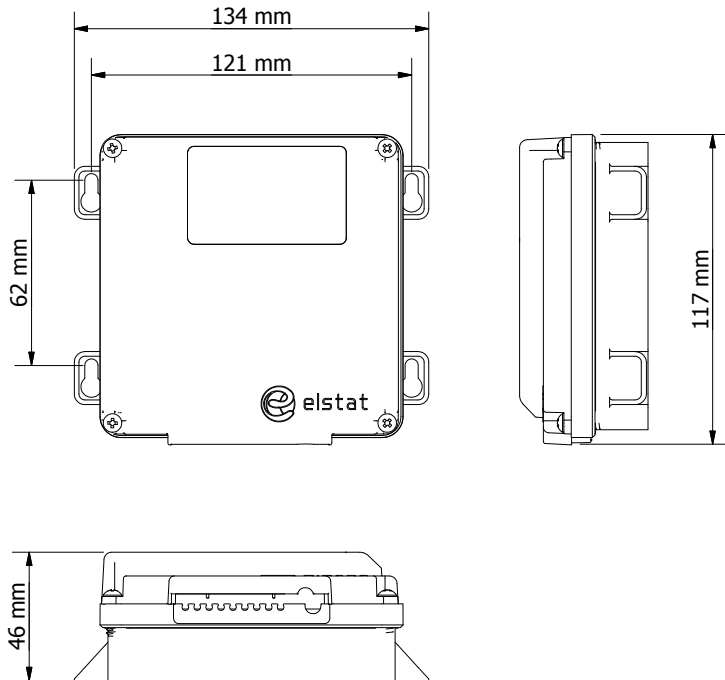


#### CDM ELECTRICAL CONNECTIONS

- 1 Modem interface
- 2 RMD port (If applicable)
- 3 Interface cable
- 4 Evaporator sensor
- 5 Door sensor
- 6 Condenser sensor
- 7 Appliance sensor
- 8 Stock sensor
- 9 RJ45 Port



### POWER SUPPLY MODULE (PSM) OVERVIEW



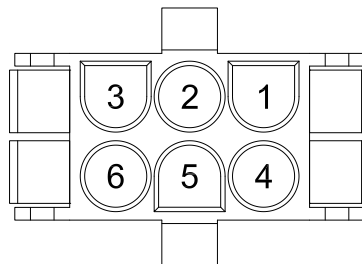
The power supply module contains the power supply for the control unit and the relays to switch the following cooler components:

- Compressor relay
- Evaporator fan relay
- Auxiliary relay
- Lights relay



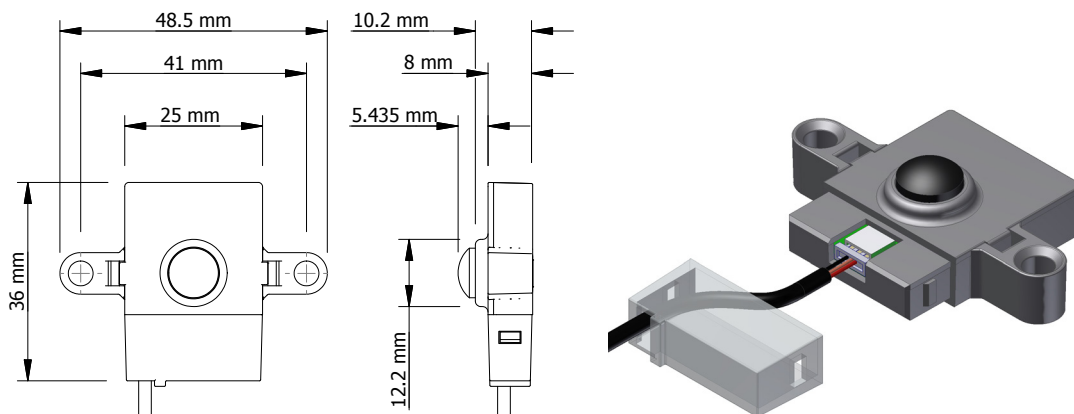
### PSM ELECTRICAL CONNECTIONS

- 1 Live
- 2 Evaporator fan
- 3 Defrost heater
- 4 Neutral
- 5 Lights
- 6 Compressor



### REMOTE MOTION SENSOR

This accessory is required when RMD controller option is used. The motion sensor head must be fixed using counter sunk screws or bolts: head max  $\varnothing 6.0\text{mm}$  (0.24in), thread max  $\varnothing 4.0\text{mm}$  (0.16in).





### RELAY RATINGS

Relay	Maximum IEC rating @100 – 240VAC	Maximum UL ratings @120V
Compressor	10(10)A, p.f. 0.6	10FLA, 60LRA
Lights	4(4)A, p.f. 0.6	250W Ballast
Evaporator fan	6(6)A, p.f. 0.6	6FLA, 36LRA
Auxiliary	6(6)A, p.f. 0.6	6FLA, 36LRA

**Note: The auxiliary relay is normally used to switch a defrost heater, or a solenoid valve, for hot gas defrosts.**

### TEMPERATURE INPUT RANGES

Sensor	Input range (°C)	Input range (°F)
Appliance sensor	-15°C to 50.0°C +/- 0.5°C	5°F to 122°F +/- 1°F
Condenser sensor	50°C to 125°C +/- 5.0°C	122°F to 257°F +/- 10°F
Evaporator sensor	-15°C to 50°C +/- 0.5°C	5°F to 122°F +/- 1°F

**Note: The NTC thermistor from Elstat is rated at -35°C to 125°C (-31°F to 257°F).**

### ENVIRONMENTAL RATINGS

Characteristic	Power supply module	Control display module
IP Rating	IPX5	IP65 Front Facia, IP24 All Over
Maximum operating temperature	Sub Zero PSM: 55°C (131°F)	55°C (131°F)
Minimum operating temperature	0°C (32°F)	-10°C (14°F)
Housing material	Black polycarbonate Food grade	Black polycarbonate Food grade

### PRODUCT APPROVALS



Conformité Européene / European  
Conformity (CE)  
EN60730-1 / EN60730-2-9



Agência Nacional de  
Telecomunicações (ANATEL)  
Resolução Anatel nº 242



European Norms Electrical  
Certification (ENEC)  
EN60730-1 / EN60730-2-9



Bluetooth Special Interest Group  
(SIG)  
Bluetooth ® Qualified Design



International Electrotechnical  
Commission (IEC)  
IEC60730-1 / IEC60730-2-9  
Glow wire / IEC60335-1



La Comisión Nacional de  
Comunicaciones (CNC)  
Resolución SC 729/80  
Resolución SC 784/87



North America (including Canada) -  
UL mark (Component recognition)  
UL 60730-1 / CSA E60730-1  
UL 60730-2-9 / CSA E60730-2-9



European Telecommunications  
Standards Institute (ETSI)  
EN300 328 V1.8.1



Federal Communications  
Commission (FCC)  
FCC Part 15.107 & 15.109



Federal Communications  
Commission (FCC)  
Part 15C



European Telecommunications  
Standards Institute (ETSI)  
EN301 489-17 V2.2.1  
EN301 489-1 V1.9.2



Instituto Federal de  
Telecomunicaciones (IFETEL)  
NOM-121-SCT1-2009

EMC

Electromagnetic Compatibility (EMC)  
EN55014-1, EN55014-2, EN61000-6-1,  
EN61000-6-3, EN61000-3-2,  
EN61000-3-3



Industry  
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Industrie  
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RSS-GEN,  
RSS-102,  
RSS-247