實習船冷凍與冷藏系統操作手冊

實習船操作手冊

REFRIG-TRAIO-00000-00

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Produced by: 船舶中心

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The listed documents are included in issue 001, dated 2025-09-10, of this publication.

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EKC Controller for Temperature Control

Description

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Table 1 References

Data module/Technical publication	Title
None	

Description

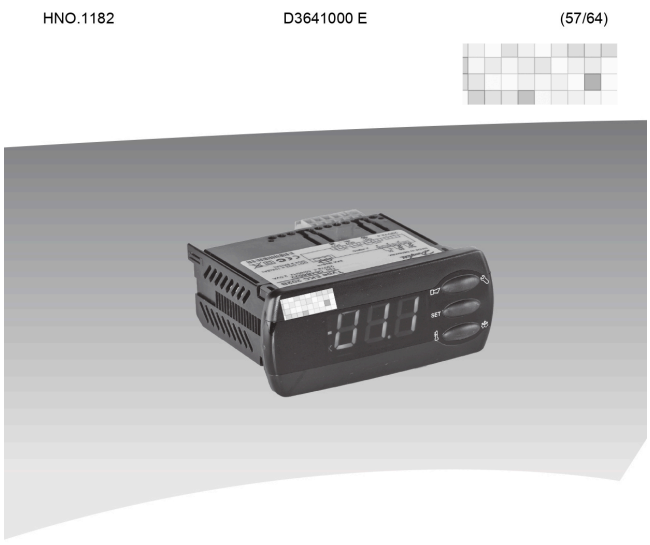
1 Introduction

1.1 Application

The controller is used for temperature control refrigeration appliances and cold room in supermarkets

Control of defrost, fans, alarm and light

For front panel mounting



Controller for temperature control
- EKC 202

Manual

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Fig 1 EKC202 Temperature Controller

1.2 Principle

The controller contains a temperature control where the signal can be received from one temperature sensor.

The sensor is placed in the cold air flow after the evaporator or in the warm air flow just before the evaporator.

The controller controls the defrost with either natural defrost or electric defrost. Renewed cutin after defrost can be accomplished based on time or temperature.

A measurement of the defrost temperature can be obtained directly through the use of a defrost sensor.

Two to four relays will cut the required functions in and out – the application determines which:

– Refrigeration (compressor or solenoid valve)
– Defrost
– Fan
– Alarm
– Light

The different applications are described on next page.

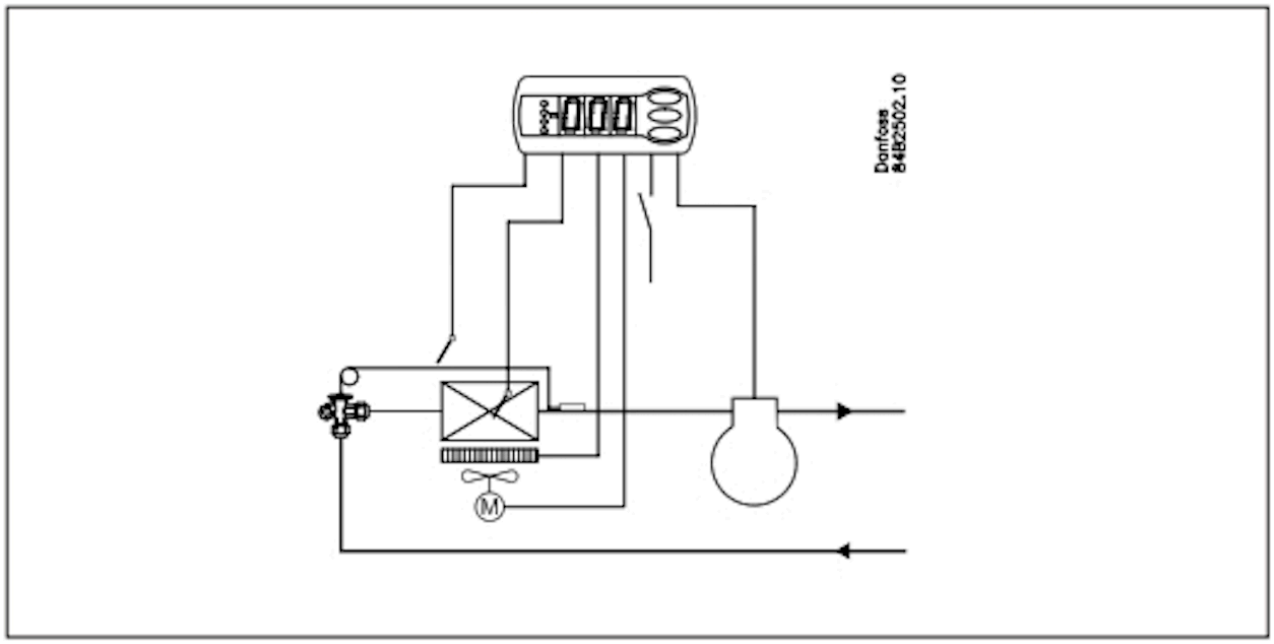

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Fig 2 Controller Connection Diagram

1.3 Advantages

– Integrated refrigeration-technical functions
– Defrost on demand in 1:1 systems
– Buttons and seal imbedded in the front
– IP65 density from the front panel
– Digital input for either:
  • Door contact function with alarm
  • Defrost start
  • Start/stop of regulation

- Night operation
- Change-over between two temperature reference
- Case cleaning function

– Instant programming via programming key

– HACCP

  Factory calibration that will guarantee a better measuring accuracy than stated in the standard EN 441-13 without subsequent calibration (Pt 1000 ohm sensor)

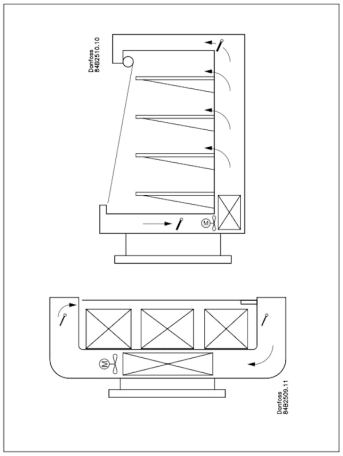

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Fig 3 Air Flow Diagram

1.4 Extra module

The controller can afterwards be fitted with an insertion module if the application requires it.

The controller has been prepared with plug, so the module simply has to be pushed in

– Battery and buzzer module

  The module guarantees voltage to the controller if the supply voltage should drop out for more than four hours. The clock function can thus be protected during a power failure.

– Data communication

  If you require operation from a PC, a data communication module has to be placed in the controller.

– Coordinated defrost via data communication

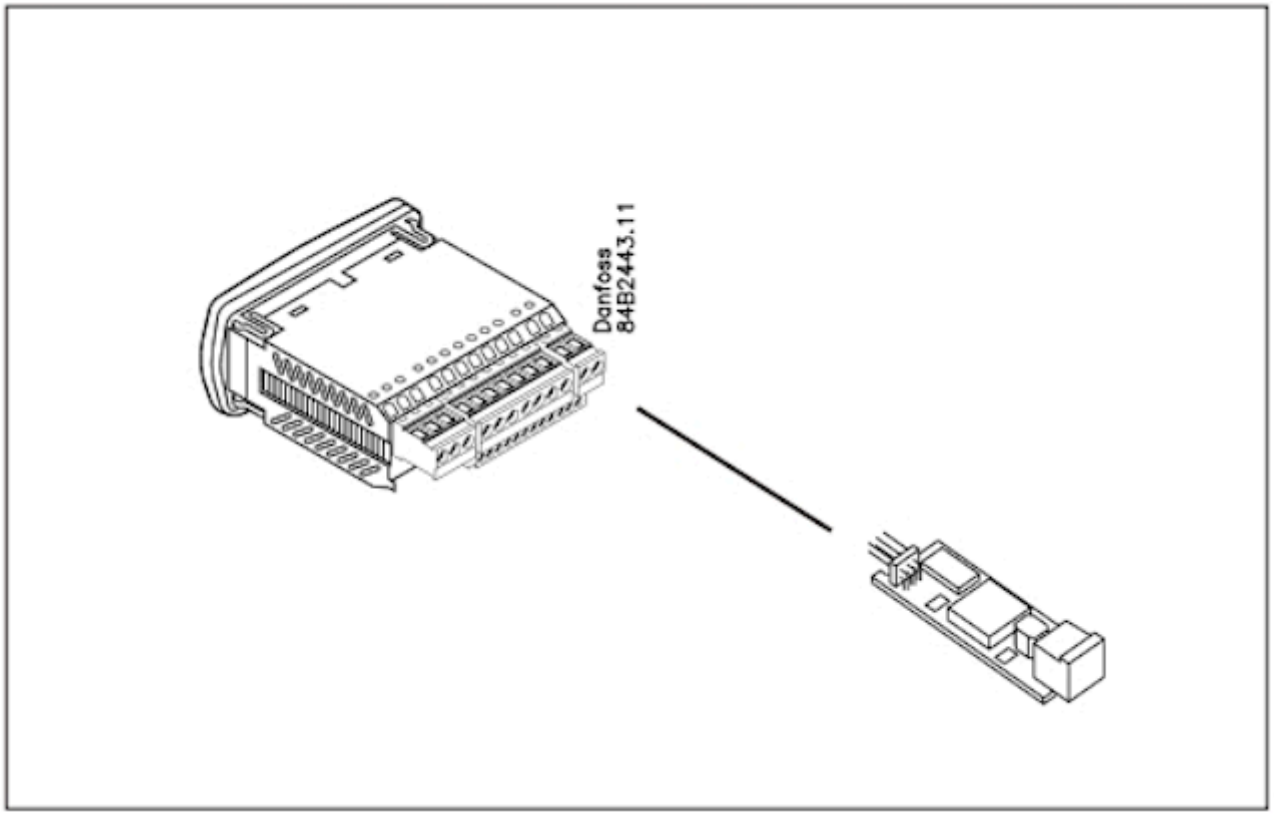

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Fig 4 Module Installation

Refrigeration System

Ozone Generator

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None	

Description

1 機器簡介及操作說明

機型：**OWA-200**

1.1 操作說明

1 此機為掛壁、桌上兩用

2 機器右側為電源輸入插座，內附有乙個備用保險絲，電源輸入座旁有115V/230V之切換鈕，請先確認是否已輸入電源後，再插電；即完成待機狀態。

3 電源開關(POWER)ON時，PUMP即啟動；指示燈亮起，上方調整鈕為O3濃度調整，可由0~200mg/hr調整，正確調整範圍在80%~90%位置，即可達需求。

4 O3輸出端在電源側，管子接上後，即完成。

5 機器之一般注意事項請參照機上方之說明。

1.2 機器故障之簡易辦試

– A. 出氣孔無氣體或風量太小時即表示產生器、過濾器阻塞或是PUMP故障所致；處理方式為清洗產生器或更換過濾器(或PUMP)。例如：PUMP故障則需更換之。

– B. 臭氧電源指示燈不亮，但AIR PUMP有運作且流量也有輸出時，即表示臭氧高壓故障，則無臭氧產生；此時有兩種故障排除方法：a.卸下臭氧出口下方，標示11V/FUSE保險絲螺帽蓋，更換高壓DC12V輸入端之保險絲(20㎜/2A；備品已附在配件包內)。b.若更換保險絲後仍無法產生臭氧，則需更換高壓。

1.3 機器之一般注意事項

1 請先確定欲輸入電壓是否正確，接地線需確實安裝接地。

2 請勿安裝於高潮濕場所。

3 請定期更換濾網及空氣濾心。

4 安裝時，機器放置需高於液體面，以免液體倒灌傷及機器。

5 請勿暴露於高濃度臭氧中。

6 臭氧機請定期做保養(10個月至一年，至少做一次保養)。

Distribution Box B

Dimension Drawing

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None	

Description

1

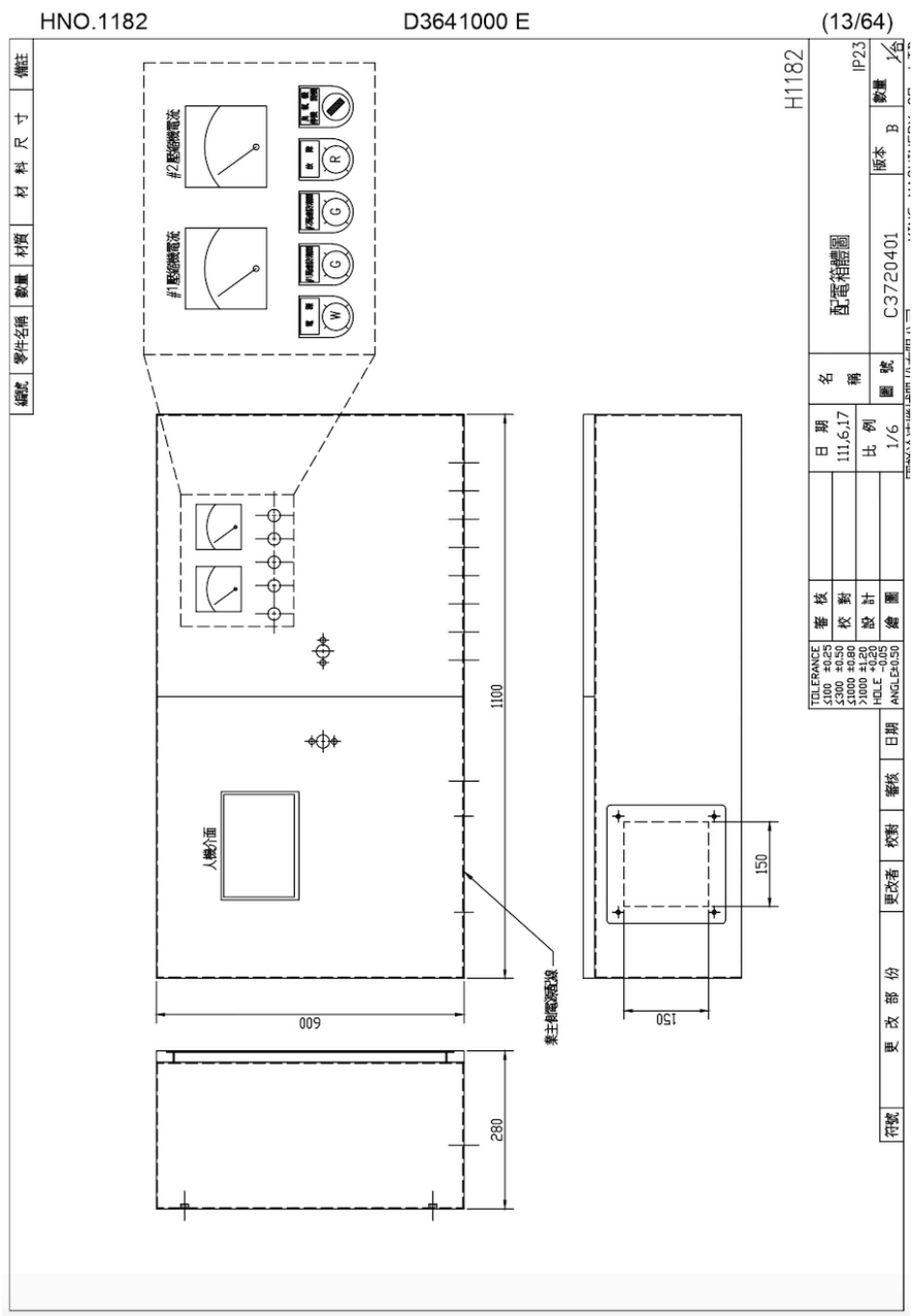

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Fig 1 Distribution Box B Dimensional Drawing