

# Remote access of cold rooms with Optyma™ Control **keeps you in control**

Optyma™ Control with RS485 ADAP-KOOL® compatible Modbus offers remote and accurate control of cold rooms .

Optyma™ Control provides HACCP temperature monitoring in compliance with EN13485 Class II. Thanks to the unique built-in differential magnetothermic circuit breaker, which guarantees safety by cutting the general power supply, Optyma™ Control offers both control and protection in a single unit.

Optyma™ Control with

## RS485

Modbus can be used as stand-alone or integrated in a complete ADAP-KOOL® system.



# Optyma™ Control, single-phase

## Power supply

Voltage	230 V AC ± 10% 50/60 Hz
Max absorbed power (electronic control)	~ 7 VA

## Ambient conditions

Operating temperature	-5 to +50°C
Storage temperature	-30 to +70°C
Relative humidity	< 90% RH

## General characteristics

Connectable sensor types	NTC 10K 1%
Resolution	0.1 °C
Probe tolerance	± 0.5 °C
Operating range	-45...+45 °C

## Output characteristics – max. applicable load (230 V AC)

Compressor	1500 W (AC3)
Defrost	3000 W (AC1)
Fans	500 W (AC3)
Room light	800 W (AC1)
Configurable alarm contact / aux (voltage-free contact)	100 W

## General electric protection

Bipolar differential magnetothermic circuit breaker	16A Id = 300 mA switching power 4.5 kA Id = 30 mA (on request)
---	---

## Insulation and mechanical characteristics

Cover protection rating	IP 65
Cover material	self-extinguishing ABS
Type of insulation	Class II
Box dimensions	262 x 168 x 97

## Ordering

Type	Code no.
Optyma™ Control, single-phase (2 HP)	080Z3200

## Applications:

- Complete control of single-phase static or ventilated refrigeration systems up to 2 HP, with off-cycle or electrical defrosting and direct or pump-down compressor stop.
- Evaporator control via liquid line solenoid valve.

## Main characteristics:

- Guaranteed certified safety and protection thanks to incorporated differential magnetothermic circuit breaker, which cuts the general power supply.
- Simple wiring and live outputs.
- New hinged cover for ease of installation and opening.
- Transparent cover for access to magnetothermic breaker, all with IP 65 protection rating.
- Simple, flexible programming for optimum versatility.
- HACCP temperature monitoring in compliance with EN13485 Class II.
- Remote control with RS485 Modbus.
- Compressor can be run in pump-down stop mode.
- Integration of control and protection in a single roomdedicated unit reduces installation time and costs.

### Options:

- Hot-gas defrost control.

## Optyma™ Control, three-phase

	Optyma™ Control, three-phase (4 HP)	Optyma™ Control, three-phase (7.5 HP)
Case dimensions	400 x 300 x 135 mm	400 x 300 x 135 mm
Protection rating	IP 65	IP 65
Power supply (3F + N + T)	400 V AC ±10% 50/60Hz	400 V AC ±10% 50/60Hz
Load type	three-phase	three-phase
Operating temperature	-5 to +40°C	-5 to +40°C
Storage temperature	-25 to +55°C	-25 to +55°C
Relative ambient humidity	< 90% RH	< 90% RH
Main switch / general protection	4 poles magnetothermic 16A	4 poles magnetothermic 25A
Compressor protection	motor circuit breaker	motor circuit breaker
Defrosting	electrical	electrical
Status indicators	LED + display	LED + display
Alarm signals	LED + buzzer	LED + buzzer

### Inputs

Ambient probe	NTC 10K 1%	NTC 10K 1%
Evaporator probe	NTC 10K 1%	NTC 10K 1%
Door switch	present	present
High/low pressure switch	present	present
Kriwan® connection	present	present
Compressor functioning mode selection	pump-down / thermostat	pump-down / thermostat

### Outputs

Compressor	370 W to 3000 W (0.5 to 4 HP)	3000 W to 5500 W (4 to 7.5 HP)
Condenser fans output 1	800 W (1ph)	800 W (1ph)
Condenser fans output 2 (separated)		total (1ph)
Evaporator fans	500 W (1ph)	2000 W (1ph / 3ph)
Defrosting heaters	6000 W	9000 W
Room light	800 W (AC1) resistive load	800 W (AC1) resistive load
Solenoid valve	present	present
Compressor oil heater	present	present
Alarm relay	100 W	100 W

### Ordering

Type		Code no.
Optyma™ Control, three-phase (4 HP)	4.5-6.3 A	080Z3201
Optyma™ Control, three-phase (4 HP)	7-10 A	080Z3202
Optyma™ Control, three-phase (7.5 HP)	11-16 A	080Z3206
Optyma™ Control, three-phase (7.5 HP)	14-20 A	080Z3207

### Applications:

- Control of three-phase refrigeration plant up to 7.5 HP, static or ventilated, with off-cycle or electrical defrosting.

### Main characteristics:

- Direct control of the compressor, condenser fans, compressor oil heater, defrosting heaters, evaporator fans, solenoid valve, room light and all standard compliant electrical safeguards.
- Differential magnetothermic circuit breaker (for cutting the general power supply) accessible from the front panel.
- Adjustable motor circuit breaker for compressor protection accessible from the front panel.
- Easy wiring on the internal terminal block.
- Selection of functioning mode for the compressor (pumpdown / thermostat).
- HACCP temperature monitoring in compliance with EN13485 Class II.
- Remote control with RS485 Modbus.
- Auxiliary relay with activation configurable by parameter.
- Transparent cover for access to magnetothermic circuit breaker, all with IP 65 protection rating.
- Electronic control with wide LED display and easy-to-use buttons.
- Status signaling with LED icons.

## Dimensions

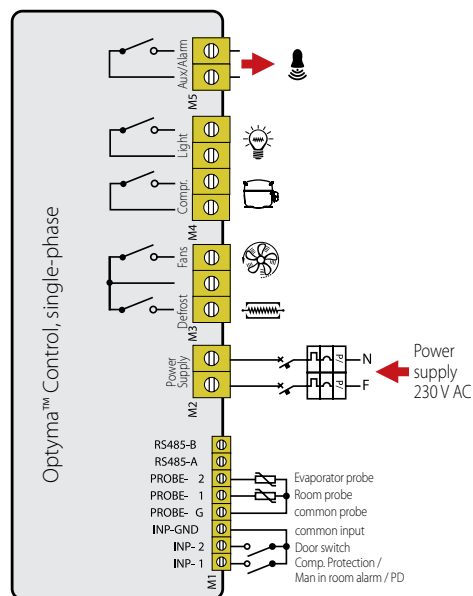


Optyma™ Control, single-phase

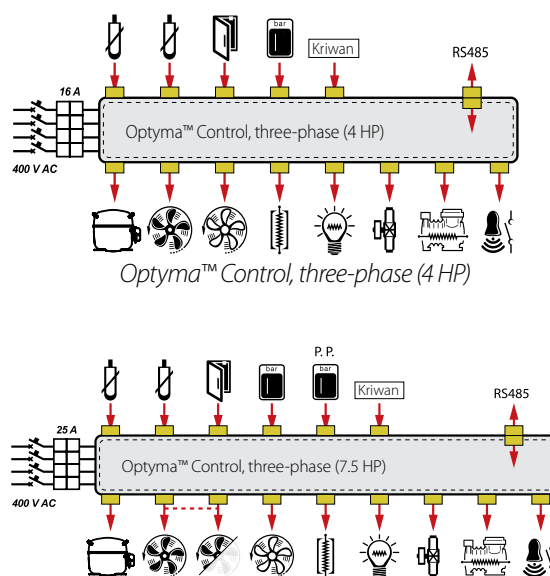


Optyma™ Control, three-phase

## Connection diagrams



Optyma™ Control, single-phase



Optyma™ Control, three-phase (7.5 HP)

## Complete portfolio from Danfoss for control of your refrigeration plant



ADAP-KOOL™ systems



Optyma™ condensing units



Remote control of cold rooms and convenience stores

