



The Ranco® RDT Digital Controller Series are new generation microprocessor-based, multi-function, configurable temperature controls for commercial refrigeration applications, such as freezing and refrigerating display cases and compartments, coolers and chillers, and plug-in refrigerated counters.

They provide for full control of 'static' or 'ventilated' refrigeration units working at positive and negative temperatures, and incorporate all features needed by modern systems for complete compressor and evaporator fan management, as well as defrost control.

Available in 3 key models: **RDT-1110** , **RDT-2210** , **RDT-3210**

Features and Benefits

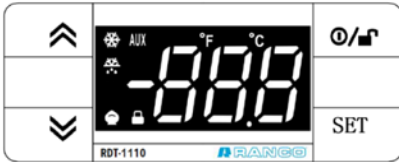
- Plug & play electronic technology with single or double sensor
- Touch display with easy to read large digits and color icons
- 3 digit high accuracy temperature control: 0.1 precision
- Scale in °C and °F
- Configurable inputs for full temperature management
- Individual set-point, differential and time delay
- Comprehensive programming functions with easy browsing and intuitive Menu setting:
User and Installer menu level, probe calibration, set-point, differential, compressor delay, etc.
- Defrost and deep cooling functions
- 'Off-cycle' and 'active' defrost control: time controlled with / without evaporator sensor, or temperature controlled
- Fan management (on RDT-3210 model)
- Alarm management: high/ low temperature, faulty probes
- A configurable Digital Input for extended functionalities: defrost activation, deep cooling, door switch, standby, delayed alarms, external alarms
- Software keypad lock
- Diagnostic and self-testing procedures
- TTL port for copy card
- Ergonomic design
- Panel mounting brackets
- NTC temperature sensor probes included
- Multi-lingual User Manual
- Available in the 230 V and 120 V version

Specifications

Part Numbers	Description	Temperature Range °C (°F)	Compressor Relay Rating	Off-cycle Defrost Frequency/duration	Defrost Relay Rating	Fan Relay Rating	Electrical Rating
RDT-1110	Digital Temperature Controller	-50...150°C (-58...302°F)	20 Amp	250 h / 250 min	-	-	230V AC 50/60 Hz
RDT-2210	Digital Temperature Controller	-50...150°C (-58...302°F)	20 Amp	250 h / 250 min	10 Amp	-	230V AC 50/60 Hz
RDT-3210	Digital Temperature Controller	-50...150°C (-58...302°F)	20 Amp	250 h / 250 min	10 Amp	5 Amp	230V AC 50/60 Hz
RDT-1110U	Digital Temperature Controller	-50...150°C (-58...302°F)	20 Amp	250 h / 250 min	-	-	120V AC 50/60 Hz
RDT-2210U	Digital Temperature Controller	-50...150°C (-58...302°F)	20 Amp	250 h / 250 min	10 Amp	-	120V AC 50/60 Hz
RDT-3210U	Digital Temperature Controller	-50...150°C (-58...302°F)	20 Amp	250 h / 250 min	10 Amp	5 Amp	120V AC 50/60 Hz

Available Versions

RDT-1110

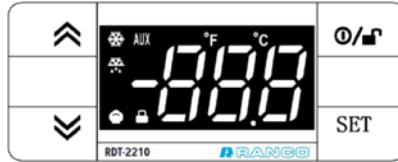


Heat & Cool mode - manages compressor, off-cycle defrost and alarms

Includes:

- 1 relay 20A on compressor
- 1 input sensor probe
- 1 digital input
- TTL port for copy card

RDT-2210

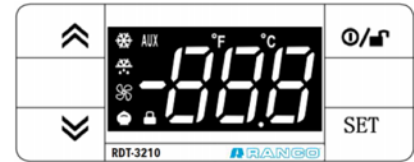


Heat & Cool mode - manages compressor, active defrost cycle and alarms

Includes:

- 2 relays: 20A on compressor
10A for active defrost
- 2 input sensor probes
- 1 digital input
- TTL port for copy card

RDT-3210



Heat & Cool mode - manages compressor, active defrost cycle, evaporator fan and alarms

Includes:

- 3 relays: 20A on compressor
10A for active defrost
5A for evaporator fan
- 2 input sensor probes
- 1 digital input
- TTL port for copy card

Technical Characteristics

Operating temperature range:

- use: -5°C to 50°C (23°F to 122°F)
- storage: -30°C to +80°C (-22°F to 176°F)

Input characteristics:

- NTC probe: -50 °C to 150°C (-58°F to 302°F)
- Accuracy: NTC (-50°C to 70°C) +/- 1°C (-58°F to 158°F) +/- 1°
- Resolution: 0.1°

Mechanical characteristics:

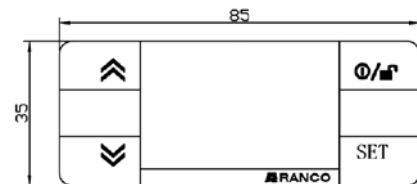
- Casing: PC+ABS resin casing, polycarbonate window
- Terminals: screw / disconnectable terminals for 2.5mm² cross-sectional cable area
- Connector: TTL for copy card
- Humidity: use / storage 10 ... 90%RH (non-condensing)

NTC probe:

- 2 meter (79")
- diameter of the temperature sensor: 5 mm (0.19685")
- made of TPE (thermoplastic elastomer), also available with metal cap

Product Dimensions

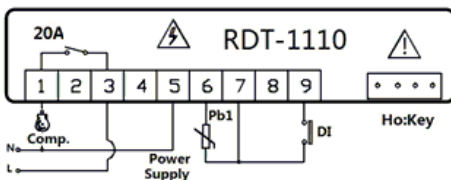
- Front panel: 85x35 mm, depth 63 mm
- Display: 48x30 mm



- Panel mounting: 71x29 mm drilling template

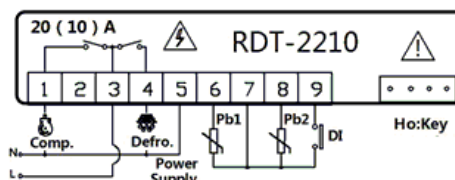


Wiring Diagrams



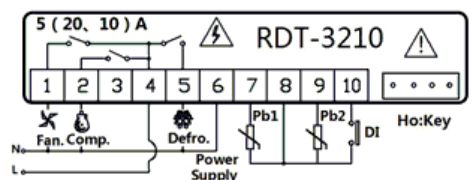
Wiring Diagram Legend

- Pb1 : input sensor probe 1
- Pb2 : input sensor probe 2
- DI : digital input
- TTL : port for copy card



Digital outputs

- Compressor relay : 2Hp 20A max 240 Vac
- Defrost relay: 1/2 Hp 10A max 250 Vac
- Fan relay: 5A max 250 Vac



Power supply

- 230 V (+/-10%), 50/60Hz
- or
- 120 V, (+/-10%), 50/60Hz

Power Consumption : 4,5 W max