

NANO__VD

NANO04 VD | NANO300 VD | NANO400 VD
 NANO750 VD | NANO1000 VD

A line of power and control boards for refrigeration systems with three-phase compressors up to 10 HP that provide complete cold room management. You can control the room light and the stand-by system using the buttons on the thermostat. Integrated PEGO thermo-regulator controls compressor, ventilation, defrosting and light. The unit also controls the door switch, which automatically turns on the room light, and compressor and fan shutdown.



APPLICATIONS

- Complete control of three-phase static or ventilated refrigeration systems up to 10 HP, with electric or off-cycle defrost.

OPTIONS

- Installation of magnetothermic circuit breakers instead of fuses.
- Compressor shutdown in pump-down mode.
- Hot gas defrost control.

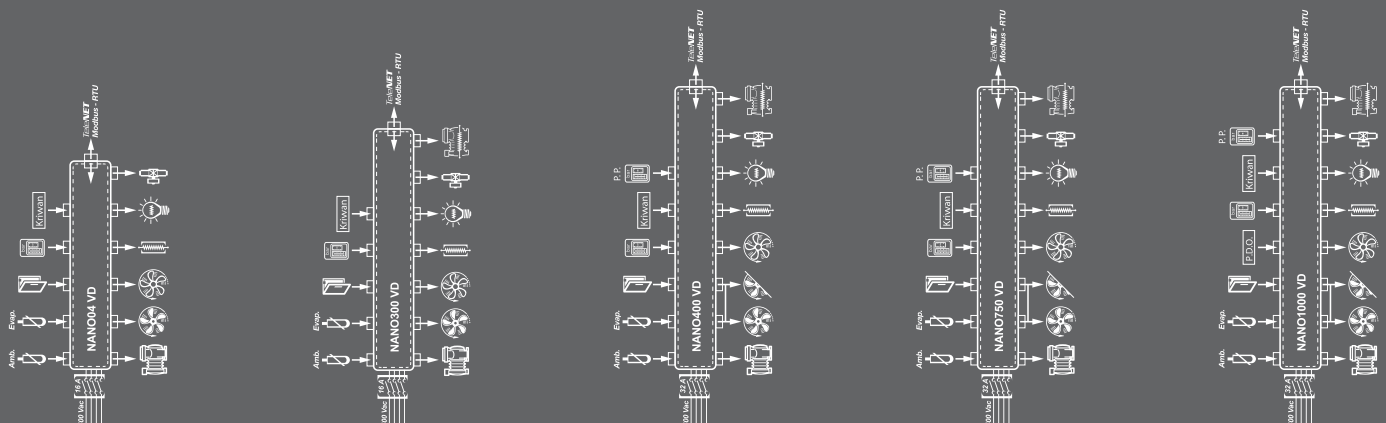
MAIN CHARACTERISTICS

- Designed to provide an immediate start-up and easy maintenance.
- Direct control of compressor, condenser fans, compressor oil element, defrost elements, evaporator fans, solenoid valve, door heater, room light and all standard-compliant electrical safeguards.
- Compact unit with self-extinguishing ABS housing

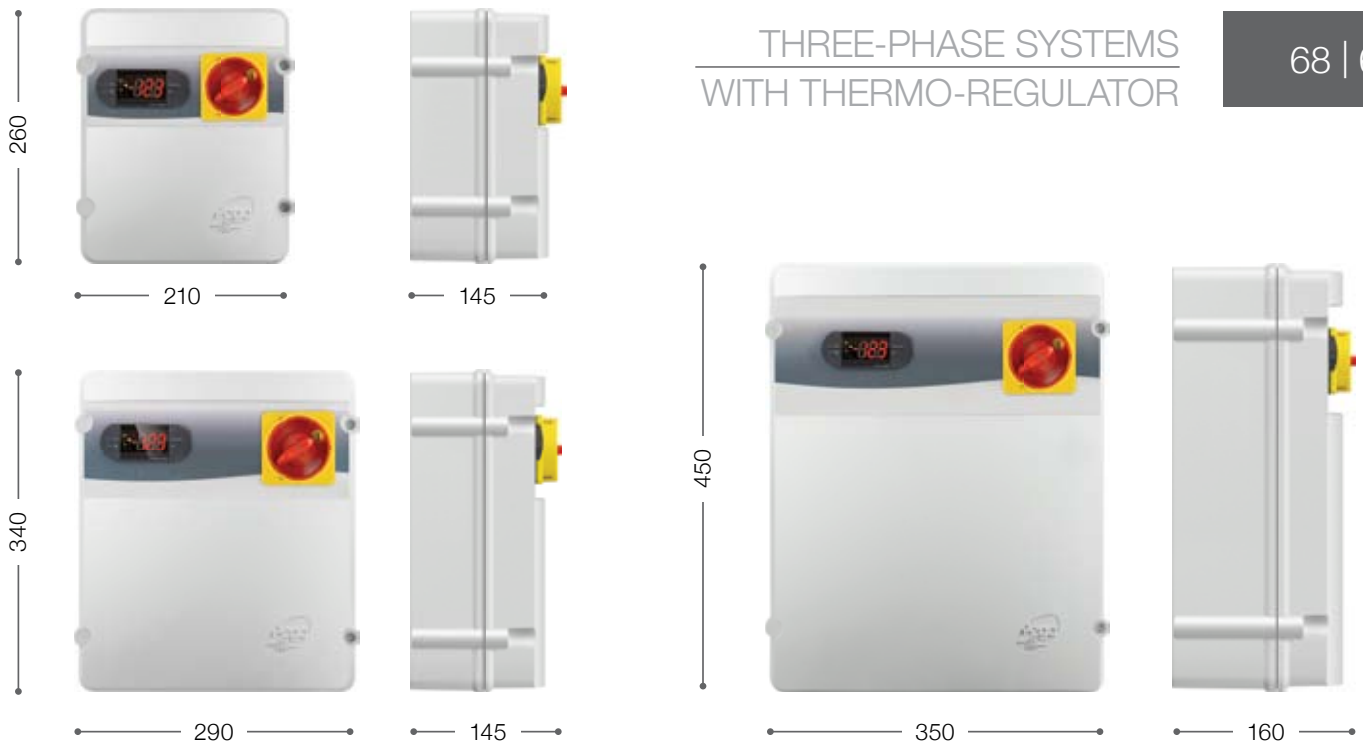
panel and IP55 protection rating plus circuit breaker on front of panel.

- Integrated PEGO thermo-regulator (Expert Nano 4CK).
- System status indicated by display.
- Key operated ON/OFF.
- Cold room light ON/OFF switch with key or by means of door switch.
- Key operated manual START/STOP defrosting.
- Clock for programmed defrost (RTC).
- Configurable multifunction output, alternative to the light output.
- RS485 serial connection with Modbus-RTU or Telenet protocol.

CONNECTION DIAGRAMS



THREE-PHASE SYSTEMS WITH THERMO-REGULATOR



TECHNICAL CHARACTERISTICS	NANO04 VD	NANO300 VD	NANO400 VD	NANO750 VD	NANO1000 VD
BOX DIMENSIONS	210 x 260 x 145 mm	290 x 340 x 145 mm	350 x 450 x 160 mm	350 x 450 x 160 mm	350 x 450 x 160 mm
WEIGHT	4 kg	5 kg	6 kg	7 kg	7 kg
PROTECTION RATING	IP 55	IP 55	IP 55	IP 55	IP 55
POWER SUPPLY	400 V AC $\pm 10\%$ 50-60 Hz	400 V AC $\pm 10\%$ 50-60 Hz	400 V AC $\pm 10\%$ 50-60 Hz	400 V AC $\pm 10\%$ 50-60 Hz	400 V AC $\pm 10\%$ 50-60 Hz
LOAD TYPE	THREE-PHASE	THREE-PHASE	THREE-PHASE	THREE-PHASE	THREE-PHASE
WORKING TEMPERATURE	-5 \div +50 $^{\circ}$ C	-5 \div +50 $^{\circ}$ C	-5 \div +50 $^{\circ}$ C	-5 \div +50 $^{\circ}$ C	-5 \div +50 $^{\circ}$ C
STORAGE TEMPERATURE	-10 \div +70 $^{\circ}$ C	-10 \div +70 $^{\circ}$ C	-10 \div +70 $^{\circ}$ C	-10 \div +70 $^{\circ}$ C	-10 \div +70 $^{\circ}$ C
RELATIVE AMBIENT HUMIDITY	< 90% RH	< 90% RH	< 90% RH	< 90% RH	< 90% RH
MAIN SWITCH	16 A	16 A	32 A	32 A	32 A
OVERLOAD PROTECTION	THERMAL RELAY	THERMAL RELAY	THERMAL RELAY	THERMAL RELAY	THERMAL RELAY
GENERAL PROTECTION	FUSES	FUSES	FUSES	FUSES	FUSES
CONTROL	PEGO THERMOREGULATOR (EXPERT NANO 4CK)	PEGO THERMOREGULATOR (EXPERT NANO 4CK)	PEGO THERMOREGULATOR (EXPERT NANO 4CK)	PEGO THERMOREGULATOR (EXPERT NANO 4CK)	PEGO THERMOREGULATOR (EXPERT NANO 4CK)
DEFROSTING	ELECTRICAL	ELECTRICAL	ELECTRICAL	ELECTRICAL	ELECTRICAL
INSULATION TRANSFORMER		PRESENT	PRESENT	PRESENT	PRESENT
STATUS INDICATORS	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY
ALARM SIGNALS	DISPLAY + BUZZER	DISPLAY + BUZZER	DISPLAY + BUZZER	DISPLAY + BUZZER	DISPLAY + BUZZER
CLOCK (RTC)	PRESENT	PRESENT	PRESENT	PRESENT	PRESENT
INPUTS					
AMBIENT PROBE	NTC 10 k Ω	NTC 10 k Ω	NTC 10 k Ω	NTC 10 k Ω	NTC 10 k Ω
EVAPORATOR PROBE	NTC 10 k Ω	NTC 10 k Ω	NTC 10 k Ω	NTC 10 k Ω	NTC 10 k Ω
DOOR SWITCH	PRESENT	PRESENT	PRESENT	PRESENT	PRESENT
OIL DIFFERENTIAL PRESSURE SWITCH					PRESENT
HIGH/LOW PRESSURE SWITCH	PRESENT	PRESENT	PRESENT	PRESENT	PRESENT
KRIWAN[®] CONNECTION	PRESENT	PRESENT	PRESENT	PRESENT	PRESENT
CONDENSER FANS REGULATOR PRESS. SWITCH (R.P.S)			PRESENT	PRESENT	PRESENT
OUTPUT					
COMPRESSOR	1800 W (0,5 \div 2,5 HP)	2200 W (0,5 \div 3 HP)	2200 \div 3000 W (3 \div 4 HP)	3000 \div 5500 W (4 \div 7,5 HP)	5500 \div 7500 W (7 \div 10 HP)
CONDENSER FANS OUTPUT 1	800 W (1PH)	800 W (1PH)	800 W (1PH)	800 W (1PH)	2000 W (3PH) OR 1500 W (1PH)
CONDENSER FANS OUTPUT 2			800 W (1PH) TOTALI	800 W (1PH) TOTALI	2000 W (3PH) OR 1500 W (1PH)
EVAPORATOR FANS	250 W (1PH)	800 W (1PH)	1500 W (1PH)	1500 W (1PH)	2000 W (3PH) OR 1500 W (1PH)
DEFROSTING HEATERS	1200 W (1PH)	4500 W (1500 W x 3, AC1)	9000 W (3000 W x 3, AC1)	10500 W (3500 W x 3, AC1)	15000 W (5000 W x 3, AC1)
ROOM LIGHT	PRESENT	PRESENT	PRESENT	PRESENT	PRESENT
SOLENOID VALVE	PRESENT	PRESENT	PRESENT	PRESENT	PRESENT
COMPRESSOR OIL HEATER	PRESENT	PRESENT	PRESENT	PRESENT	PRESENT
SUPERVISION SYSTEM	TELENET / MODBUS-RTU	TELENET / MODBUS-RTU	TELENET / MODBUS-RTU	TELENET / MODBUS-RTU	TELENET / MODBUS-RTU