EXPERT NANO

EXPERT NANO 4CK

The EXPERT NANO 4CK is a 4 relays electronic thermoregulator designed to control refrigerated counters, display windows and static or ventilated refrigeration units with off-cycle or electrical defrosting in real time (RTC). It is fitted with three analogue inputs for NTC temperature probes, one of which is configurable as a digital input, an additional digital input, four relays for the compressor control, fans, defrosting function and alarm and buzzer.
As option the connection to an echo temperature repetition.
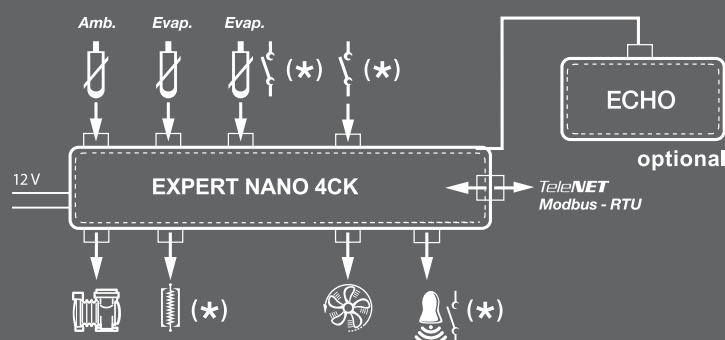
APPLICATIONS

- Control of refrigerated counters, display windows and refrigeration units.
- Control of two evaporators with two temperature probes of end defrost.

MAIN CHARACTERISTICS

- Can be configured for hot, cold or neutral zone applications.
- Can be configured for managing day / night (automatic modification of the setpoint for energy saving) activated by time mode (real time clock) or by means of the digital input.
- Can be configured to manage two evaporators with dual temperature sensor for defrost termination.
- Defrosting can be configured for off-cycle, heating element or cycle inversion and frequency and durationcan be set. End-of-defrosting can be based on time or temperature.

CONNECTION DIAGRAM
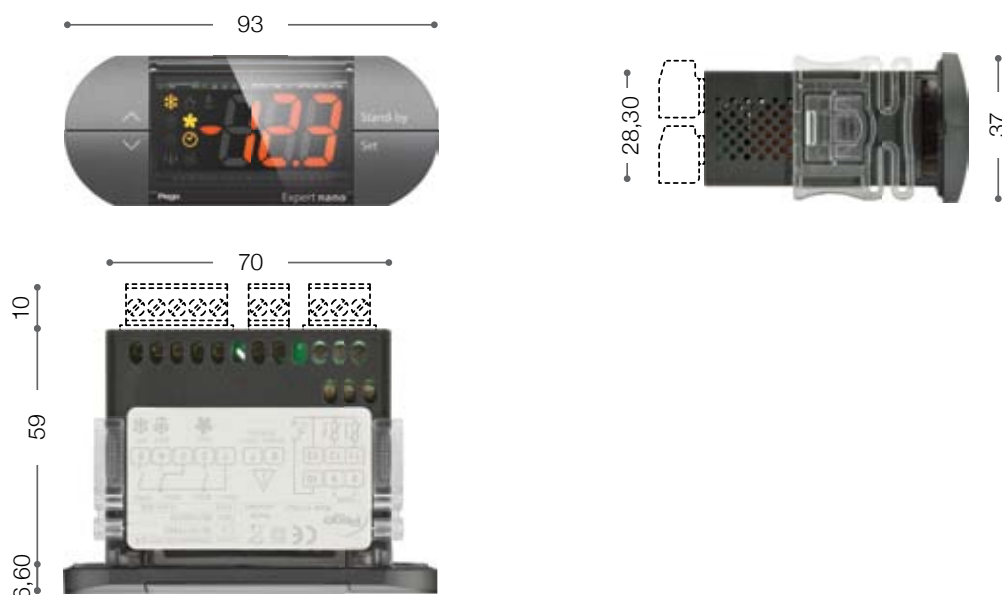(✱) = Configurable function

- Clock for programmed defrost (RTC).
- Relay for controlling the compressor, evaporator fans, defrosting resistance and alarm (defrost and alarm outputs can be configured like light output).
- Key operated manual START/STOP defrosting.
- Key operated ON/OFF.
- Cold room light ON/OFF switch with key or by means of door switch (if one output is configured like cold room light).
- Display/adjustment of temperature with decimal point.
- Internal buzzer for acoustic signals.
- Flat front surface for easy cleaning anc keys of ample dimension which can be customized with various colours (on request).
- High brightness display with increased icons and figures.
- PEGO programming philosophy guaranteeing immediate start-up.
- IP65 front protection. Two-fold fastening options: clips / screws.
- Extractable terminals.
- RS485 serial connection with Modbus-RTU or Telenet protocol.
- External transformer (optional).
- Temperature repeater (optional).

TECHNICAL CHARACTERISTICS	EXPERT NANO 4CK13
DIMENSIONS	93 x 37 mm depth 59 mm
DRILL HOLE TEMPLATE	71 x 29 mm (+0,2/-0,1 mm)
INSTALLATION	In front of board by means of rear fastening clips or two front screws
CASING	Plastic PC+ABS UL94 V-0 body, PC transparent front, Key panel PC or PC+ABS
INSULATION TYPE	Class II
FRONT PROTECTION RATING	IP65 with front board installation
POWER SUPPLY	12V AC +10/-15% 50-60 Hz ǀ 12V DC +10/-15% class 2
ASSORBED POWER	3 VA max
OPERATING TEMPERATURE	-5 ÷ 55 °C - humidity < 90% Rel. Hum. not condensing
STORAGE TEMPERATURE	-20 ÷ 70 °C humidity < 90% Rel. Hum. not condensing
UNSUITABLE OPERATING ENVIRONMENTS	Environments with strong vibrations or impacts; aggressive, polluted or corrosive atmospheres, exposure to direct solar radiation, explosive atmospheres or flammable gas.
DISPLAY	3-Digit with sign, decimal point and LED status indicators
RESOLUTION	0,1 °C
PROBE PRECISION (electronic)	±0,5 °C
READING RANGE	-45 ÷ 99 °C
CONNECTIONS	Screw removable clamps
SOFTWARE CLASS	A / Parameters saved on non-volatile memory (EEPROM)
CLOCK (RTC)	PRESENT
	INPUTS
ANALOGUE	2 inputs for NTC probes (10 kΩ 1% at 25 °C)
DIGITAL	1 input (free voltage contact)
CONFIGURABLE	1 input for NTC probes (10 kΩ 1% at 25 °C) or digital input (free voltage contact)
	OUTPUTS
COMPRESSOR RELAY (DO1)	(DO1) N.O. 16(6)A / 250V~
HEATING ELEMENTS RELAY (DO2)	(DO2) N.O. 8(3)A N.C. 6(3)A / 250V~
FAN RELAY (DO3)	(DO3) N.O. 8(3)A / 250V~
ALARM/AUX RELAY	(DO4) N.O. 8(3)A / 250V~
BUZZER	PRESENT
SUPERVISION SYSTEM	TELENET / MODBUS-RTU
	ACCESSORIES
ACCESSORIES AVAILABLE	NANO ADAPTER