

9 SPECIFICATIONS

FEATURES	N20K48 MODULAR CONTROLLER	
Power Supply	100 to 240 Vac/dc ($\pm 10\%$), 50 / 60 Hz Optionally 24V: 12 to 24 Vdc / 24 Vac (-10 % / +20 %) Maximum consumption: 10 VA	
Environmental Conditions	Operating temperature: -20 to 60 °C (-4 to 140 °F) Relative humidity: 80 % max. @ 30 °C Reduce 3 % for each °C for temperatures above 30 °C. Internal use. Installation category II. Pollution degree 2. Altitude < 2000 m.	
Input	T/C, Pt100, voltage and current (according to Table 1).	
	Internal resolution	32767 levels (15 bits)
	Display resolution	12000 level (from - 1999 to 9999)
	Input reading rate	Up to 55 per second
	Accuracy *	<ul style="list-style-type: none"> • Thermocouples J, K, T, E: 0.2 % of span ± 1 °C • Thermocouples N, R, S, B: 0.25 % of span ± 3 °C • Pt100: 0.2 % of span • 0-50 mV: 0.2 % of span • 4-20 mA, 0-5 Vdc, 0-10 Vdc: 0.2 % of span
	Input Impedance	0-50 mV, Pt100 and thermocouples: >10 M Ω 0-5 V: >1 M Ω 4-20 mA: 15 Ω (+2 Vdc @ 20 mA)
	Pt100 Measurement	3-wire type ($\alpha=0.00385$) With cable length compensation and 0.170 mA excitation current.
All input and output types are factory calibrated. The thermocouples are in accordance with NBR 12771 / 99 and RTDs NBR 13773 / 97 standards.		
Control Output	Voltage pulse for SSR (OUT A): 5 V maximum. / 20 mA SPST-NO Relay (OUT B): 3 A / 240 Vac, general use	
Communication Interfaces	<ul style="list-style-type: none"> • USB 2.0 Interface • Bluetooth Low Energy (BLE) Interface 	
Electromagnetic Compatibility	EN 61326-1:2020	
Security	EN 61010-1:2010 UL 61010-1/A2:2012	
Protection Index	Frontal Panel	IP65, polycarbonate - UL94 V-2
	Housing	IP30, ABS+PC UL94 V-0
Software	QuickTune (PC) QuickTune Mobile (Smartphones)	
Dimensions	48.8 x 48.8 x 36.7 mm (1/16 DIN)	
	Panel cut-out	45.2 x 45.2 mm (+0.5 -0.0 mm)
	Approximated Weight	70 g (without dock and modules)
Operation Start-up	3 seconds after connecting the device to a power supply.	
Warm-up time	20 minutes.	
Certifications	CE, UKCA, Anatel (00388-21-07089), FCC	

* The Accuracy specification considers the elapsed warm-up time.

Table 18 – Specifications

9.1 IDENTIFICATION

N20K48: Model with power supply 100~240 Vac/dc

N20K48 - 24V: Model with power supply 12~24 Vdc / 24 Vac

9.2 CERTIFICATIONS

CE Mark / UKCA

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

ANATEL

This device is homologated by ANATEL, according to the regulated procedures for conformity assessment of telecommunications products, and meets the technical requirements applied.

This equipment is not subject to the protection from harmful interference and may not cause interference with duly authorized systems.

For more information, see the ANATEL website www.anatel.gov.br.

FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF Exposure: A distance of 20 cm shall be maintained between the antenna and users, and the transmitter module may not be co-located with any other transmitter or antenna.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.