

Nextriv Control Industrial

Industrial DIN-rail I/O controller

NX-CT-IND

Nextriv Control

An industrial DIN-rail input/output controller that brings wired field signals into the Nextriv platform: four opto-isolated digital inputs with pulse counters, two SPDT relays, 4–20 mA and 0–10 V analog channels and two PT100 inputs. It connects to the cloud over long-range radio — up to approx. 2 km in built-up areas and approx. 15 km in open terrain. 16 local IF-THEN rules execute on the device and keep working even without connectivity, while RS232 and RS485 (Modbus RTU) ports integrate wired devices in the cabinet. A metal housing and 5–24 V DC supply make it a tool for integrators and maintenance teams.



12

physical I/O points

16

local IF-THEN rules

-200...+800
°C

PT100 input range

~15 km

open-terrain range

Key features

- 12 physical I/O points in one housing: 4 digital inputs, 2 relays, 2 × 4–20 mA, 2 × 0–10 V and 2 × PT100 — no expansion modules
- Opto-isolated 3–24 V DC digital inputs, each switchable to pulse-counter mode up to 4,000 Hz — water meters, gas meters, machine-cycle counters
- SPDT relays up to 3 A (30 V DC / 250 V AC) — valves, pumps, signalling devices, contactors
- 16 local IF-THEN rules — edge automation executes on the device and keeps working without network connectivity
- Continuous listening thanks to mains power — the controller stays ready to react instead of waiting for a transmission window
- RS232 and RS485 (Modbus RTU) ports — reads up to 32 Modbus registers and connects up to 32 wired devices
- Data buffer with automatic retransmission plus an embedded watchdog for stable operation
- Metal DIN-rail housing with surge and reverse-polarity protection — built for the realities of industrial installations

Technical specification

Digital inputs and outputs

Digital inputs	4× opto-isolated, 3–24 V DC
Input work modes	digital input or pulse counter
Input frequency	≤ 4,000 Hz
Relay outputs	2× SPDT relay, contact rating max 3 A at 30 V DC or 250 V AC

Analog inputs

Channels	2 × 4–20 mA and 2 × 0–10 V
Resolution	12-bit
Accuracy	4–20 mA: ±5%; 0–10 V: ±1% [1]

PT100 temperature inputs

Channels	2× PT100 RTD input
Probe connection	2- or 3-wire
Measuring range	-200...+800 °C [1]
Resolution	12-bit

Serial ports

Ports	1 × RS232 + 1 × RS485
Baud rate	1,200–115,200 bps
Protocols	RS232: transparent; RS485: transparent, Modbus RTU
Modbus capacity	reads up to 32 Modbus registers; up to 32 Modbus devices

Radio connectivity

Technology	long-range, low-power radio (LPWAN)
Radio band	EU868 (EU); regional variants: US915, AU915, AS923, IN865, KR920, RU864
Tx power	up to 16 dBm (EU868)
Receiver sensitivity	down to -137 dBm
Antenna	external, 50 Ω SMA connector
Device-gateway range	up to approx. 2 km in built-up areas / approx. 15 km in open terrain
Operating mode	continuous listening — always ready for commands, no transmission windows
Communication	two-way — readings to the platform, remote configuration via downlink

Device features

Local automation	16 IF-THEN rules executed on the device — they keep working without network connectivity
Threshold alarms	on-device thresholds + alert rules in the Nextriv platform
Local buffer	measurement storage with data retrieval and automatic retransmission after a connectivity outage
Device-to-device communication	an event on one Nextriv network device can trigger a reaction on another without going through the server (controller or agent role)
Operation watchdog	embedded watchdog for device working stability
Configuration	USB-C port (power, configuration, console) or remotely via platform downlink
Indicators	2× LED (system status, activity)
Button	1× reset (internal)

Power

Power supply	5–24 V DC via terminal block or 5 V via USB-C
Power connector	2-pin 3.5 mm terminal block
Protection	surge protection and reverse-polarity protection

Enclosure and operating environment

Operating temperature	-20...60 °C (-4...+140 °F)
Ambient humidity	0...95% RH, non-condensing
Ingress protection	IP30 (indoor use)
Housing	metal, black
Wiring interface	3.5 mm terminal blocks
Dimensions	93 × 70 × 22 mm (3.66 × 2.76 × 0.87 in), antenna connector excluded
Weight	142.3 g
Mounting	DIN rail, wall or desktop

Compliance and approvals

Approvals	CE, FCC
Environmental	RoHS

Ordering information	
Product code (SKU)	NX-CT-IND
Variants	long-range LPWAN radio as standard (described in this datasheet); a 4G LTE cellular variant is available (micro-SIM slot, 186 g) — without the data buffer and device-to-device communication; specify the variant when ordering
System requirement	a Nextriv Hub gateway (e.g. NX-GW-MINI, NX-GW-PRO)

[1] PT100 and analog input parameters refer to the controller's input circuitry — the overall measurement accuracy and range also depend on the connected probe or transmitter.

Specifications are subject to change without notice. The latest document versions are available in the download centre: nextriv.com/files. Questions: nextriv.com/contact.