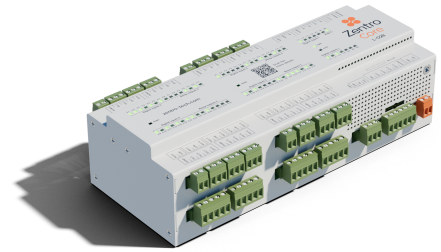


Zentro Core L-028

Programmable controller with 70 I/O points

Zentro Core L-028 is a Linux-based programmable logic controller for control, regulation and monitoring in building, HVAC and automation systems. It provides 70 I/O points: 36 digital inputs with pulse counters, 28 relay outputs, 4 transistor outputs with PWM, one analogue input and one analogue output. It includes an RS-485 serial interface and a 1-Wire bus, mounts on a 35 mm DIN rail and is powered from 24 V DC.



Part number ZN-COREL-001 · Document number
ZT-DS-CORE-L028-001-EN

FULL TECHNICAL SPECIFICATION

PRODUCT IDENTITY

Zentro part number	ZN-COREL-001
Category	Programmable logic controller (PLC) on a Linux operating system
Processor	Quad-core 1.5 GHz
Memory	8 GB
Storage	microSD

INPUTS AND OUTPUTS

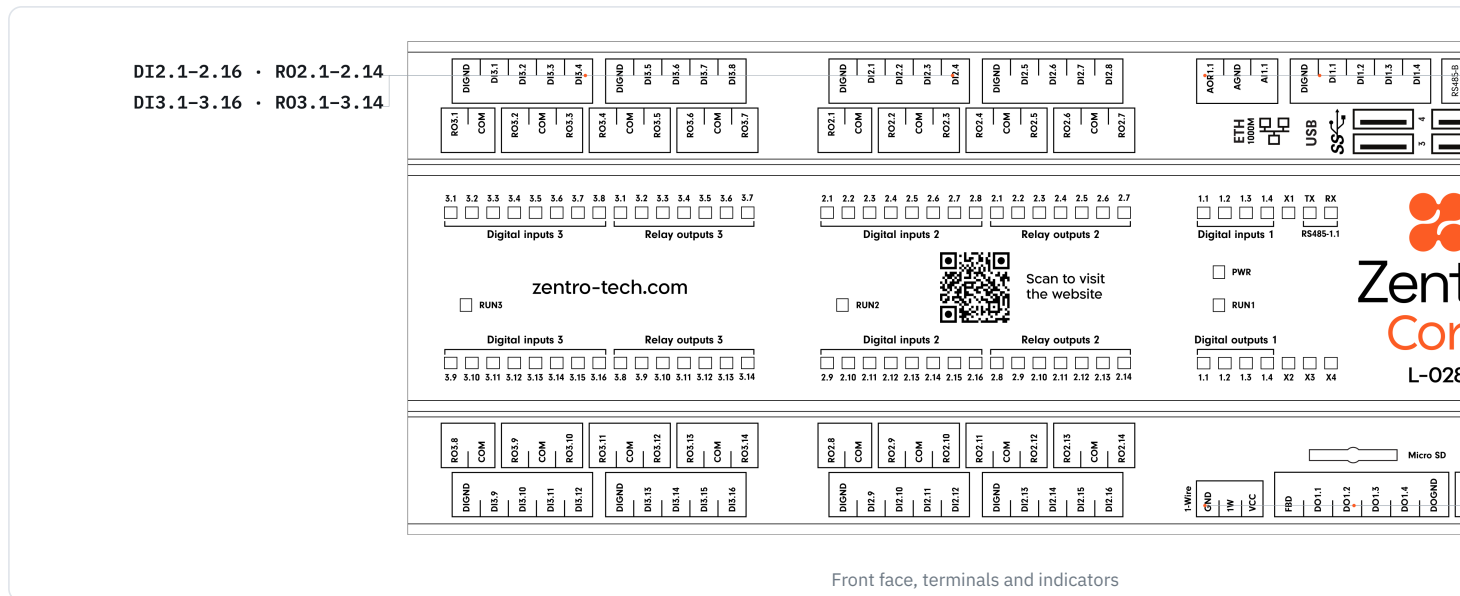
Digital inputs	36
Digital outputs	4
Relay outputs	28
Analogue inputs	1
Analogue outputs	1
Total I/O points	70
Digital input grouping	4 × 9 — four inputs in each of nine groups
Relay output grouping	1 × 4, 2 × 12 — four relays with a dedicated COM and twenty-four more in twelve pairs
Sections	3
User LEDs	4

COMMUNICATION INTERFACES

RS-485 channels	1
RS-485 galvanic isolation	Yes
Biasing resistors	560 Ω
RS-485 bit rate	2 400 – 115 200 bps
RS-485 ESD protection	±15 kV
1-Wire	One bus · RJ45 connector · Vcc 5 V, up to 50 mA · up to 15 sensors per channel
Ethernet	1 × 1 Gbit
USB	2 × USB 2.0 + 2 × USB 3.0

Wireless	Wi-Fi IEEE 802.11 b/g/n · Bluetooth 5.0 BLE · internal antenna
Protocols	Modbus TCP · Modbus RTU · open programming interface · SysFS
POWER SUPPLY	
Supply voltage	24 V DC (SELV)
Typical power consumption	8 W
Maximum power consumption	17 W
Maximum input current	0.8 A @ 24 V DC
Reverse polarity protection	Yes
ENVIRONMENTAL CONDITIONS	
Operating temperature	0 ... +55 °C
Storage temperature	–25 ... +70 °C
Humidity	10 – 95 %, non-condensing
Ingress protection	IP 20
MECHANICAL AND INSTALLATION	
Dimensions (W × H × D)	209 × 90 × 55.5 mm
Dimensions note	Excluding the DIN rail holder
Weight	572 g
Enclosure	Aluminium
Mounting orientation	Vertical
Mounting	35 mm DIN rail (EN 50022) inside a closed distribution enclosure, holder included
Conductor cross-section	Up to 2.5 mm ²
Tightening torque	Max 0.4 N·m
Earthing	Required · Class I equipment · cable lug and M4 screw · the DIN rail must also be earthed
Ventilation clearance	Minimum 80 mm between the unit and the enclosure walls where there is no forced ventilation
STANDARDS AND APPROVALS	
EU directives	LVD 2014/35/EU · EMC 2014/30/EU · RoHS 2015/863/EU
Standards	EN 60730-1:2016 · EN IEC 61000-6-2:2019 · EN IEC 61000-6-3:2021
Declaration date	02.12.2024 · Rev3
COMPATIBILITY	
1-Wire temperature sensors	All seven 1-Wire temperature sensor models in the Zentro catalogue
Temperature and humidity sensors	Supported — indoor surface-mounted temperature and humidity sensors
Pt1000 sensors	Limited — connection only through the AO1.1 and AGND terminals in 0–2 kΩ resistance measurement mode, two-wire method
1-Wire hub	Supported — 8-channel 1-Wire hub

TERMINALS AND CONNECTORS



DI1.1–1.4 · D01.1–1.4 · AI1.1 · Inputs, outputs and communication — commons DIGND / DOGND / AGND
A01.1 · RS485 · 1-Wire

DI2.1–2.16 · R02.1–2.14 Digital inputs and relays, section 2 — commons DIGND / COM

DI3.1–3.16 · R03.1–3.14 Digital inputs and relays, section 3 — commons DIGND / COM

STANDARDS AND COMPLIANCE

Compliance	The product carries the CE marking.
Compliance	Complies with EU directives LVD 2014/35/EU, EMC 2014/30/EU and RoHS 2015/863/EU.
Standard	Conforms to EN 60730-1:2016 · EN IEC 61000-6-2:2019 · EN IEC 61000-6-3:2021.
Compliance	Conformity assessed and certified by an accredited test institute, valid to 2029-11-28.
Performance	Ingress protection IP 20 per IEC 529.
Performance	Safety extra-low voltage (SELV) supply, 24 V DC.
Performance	4 000 V isolation between relay contacts and control circuitry.



Compliance evidence is supplied on request.