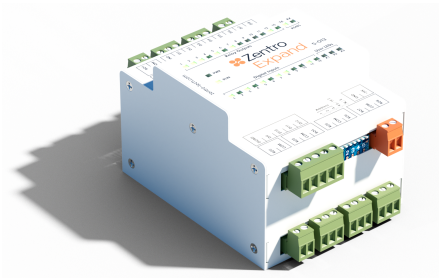


Zentro Expand

Expansion module — 12 inputs and 13 relay outputs

Zentro Expand is an expansion module that adds 12 digital inputs and 13 relay outputs to a control system. It connects to the controller over Modbus RTU on a galvanically isolated RS-485 line, allowing control points to be added at a distance from the main controller. The inputs include a pulse counter with memory and support the Direct Switch function, which links an input directly to an output.



Part number ZN-EXPAND-001 · Document number
ZT-DS-EXPAND-001-EN

FULL TECHNICAL SPECIFICATION

PRODUCT IDENTITY

Zentro part number	ZN-EXPAND-001
Category	Input and output expansion module over Modbus RTU

INPUTS AND OUTPUTS

Digital inputs	12
Digital outputs	0
Relay outputs	13
Analogue inputs	0
Analogue outputs	0
Total I/O points	25
Digital input grouping	4 × 1, 8 × 1 — one group of four inputs and one group of eight
Relay output grouping	1 × 3, 2 × 5 — three relays with a dedicated COM and ten more in five pairs
Sections	1
User LEDs	3

COMMUNICATION INTERFACES

RS-485 channels	1
RS-485 galvanic isolation	Yes
Biasing resistors	None
Line terminator	Built-in, attachable, 120 Ω
RS-485 bit rate	2 400 – 115 200 bps
Protocols	Modbus RTU
Modbus defaults	Address 15 · 19 200 bps · 8 bits · no parity · 5 ms debounce · MasterWatchdog off, 5 s timeout
Hardware configuration	DIP switches

POWER SUPPLY

Supply voltage	24 V DC (SELV)
Typical power consumption	2 W

Maximum power consumption	11 W
Maximum input current	0.5 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

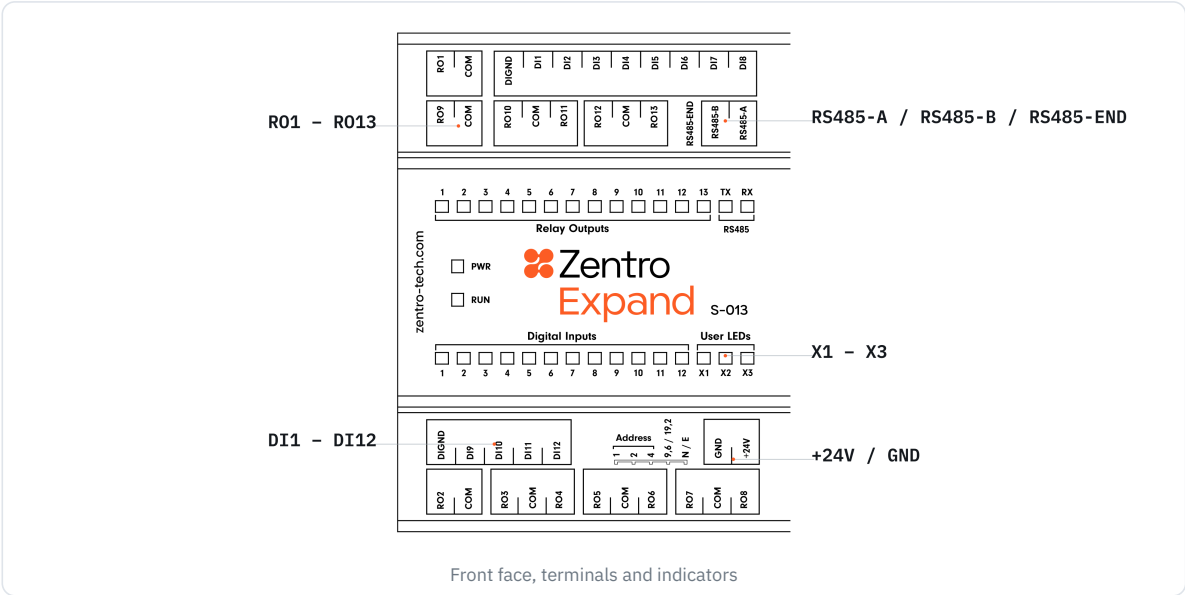
MECHANICAL AND INSTALLATION

Dimensions (W × H × D)	72 × 90 × 56 mm
Dimensions note	Depth includes the DIN rail clip
Weight	320 g
Enclosure	Aluminium
Mounting orientation	Horizontal
Mounting	35 mm DIN rail, holder included
Conductor cross-section	Up to 2.5 mm²

STANDARDS AND APPROVALS

EU directives	LVD 2014/35/EU · EMC 2014/30/EU · RoHS 2015/863/EU · WEEE 2012/19/EU
Standards	EN 60730-1:2016 · EN IEC 61000-6-2:2019 · EN IEC 61000-6-3:2021
Declaration date	30.11.2024 · Rev 1

TERMINALS AND CONNECTORS



DI1 – DI12	SINK-type digital inputs – common DIGND
R01 – R013	Relay outputs – common COM
RS485-A / RS485-B / RS485-END	Modbus RTU serial line
+24V / GND	Supply

X1 - X3	User indicators
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STANDARDS AND COMPLIANCE

Compliance	The product carries the CE marking.
Compliance	Complies with EU directives LVD 2014/35/EU, EMC 2014/30/EU, RoHS 2015/863/EU and WEEE 2012/19/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	4 000 V isolation on relay outputs and 2 000 V on digital inputs.



Compliance evidence is supplied on request.