CH8SH CAN Hub Module

- 8 CAN ports
- “Power and CAN OK” LED for each port
- Protective features on CAN ports
- 3 CAN diagnostics LEDs

The CH8SH is designed to be heart of machines CAN bus. It allows creation of star topology bus, which in turn improves reliability and fault tolerance.

The M12 CAN connectors are designed to supply not only the bus but also supply voltage to the electronics of controller connected to it. The built-in protection monitors voltage in CAN lines and in fault case it switches off CAN to keep the rest of the CAN communication intact. Also outgoing current is monitored and in overload case it is switched off.

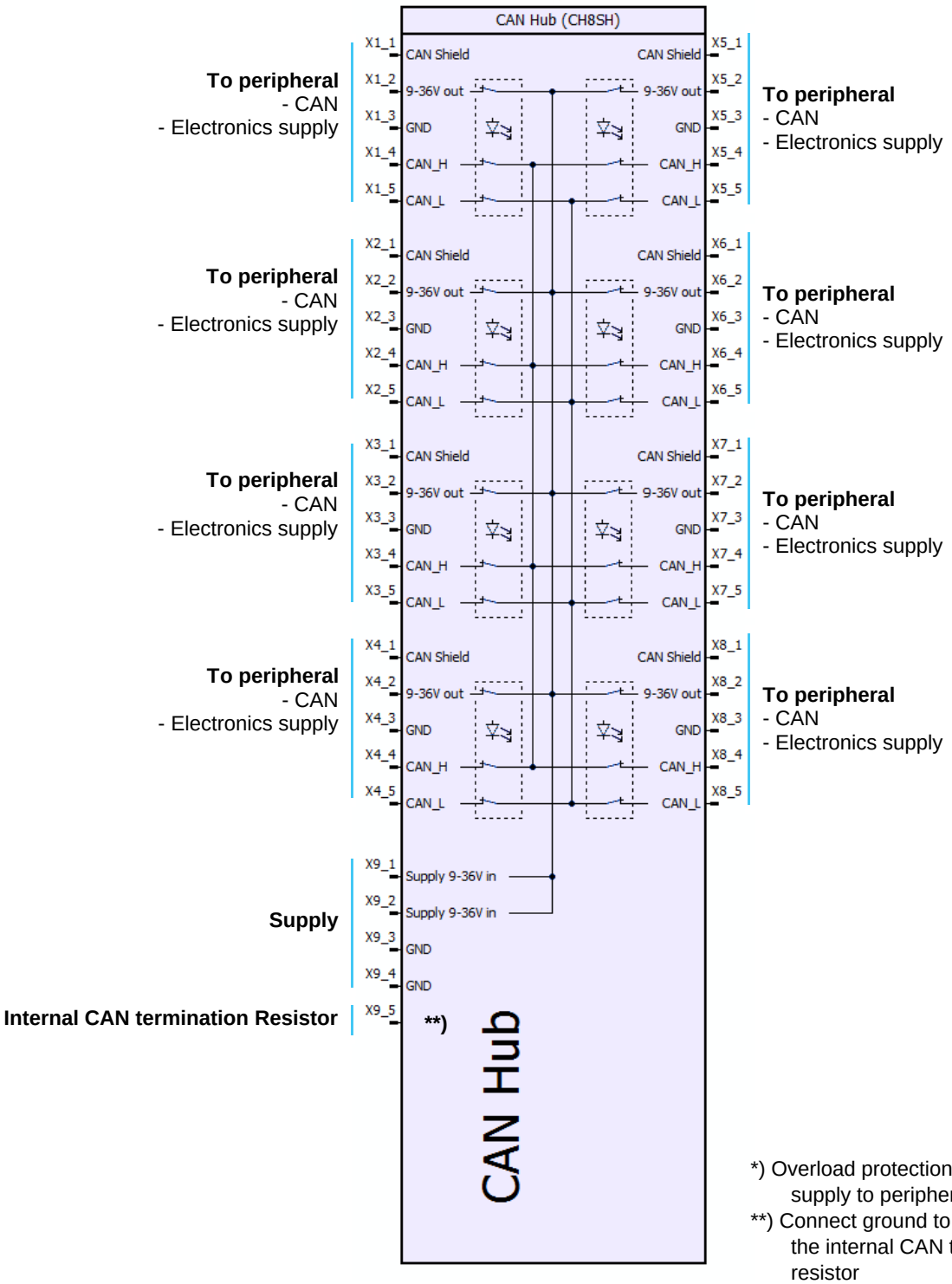
The 3 additional LEDs in mid-section of the unit allow easy and fast basic diagnostics of the bus.

The unit has built in CAN termination resistor that can be activated via connecting pin 5 to ground at power supply connector X9.

Technical Information

- 8–28 VDC Operating voltage range
  Current consumption < 100mA (without external load)
  (Protected against reverse polarity)
  Absolute maximum and minimum: -0,6–32 VDC
- -40…+85°C operating temperature range
- IP67 aluminium housing
- Weight 0.65kg
- Main dimensions 160mm x 120mm x 37,6mm
- 8x CAN connectors (for creating star topology bus)
- Max 1.5A for each CAN connector for supplying electronics with built-in short circuit protection
- Indicator LEDs:
  - 8 pcs for “Power and CAN good”
  - 3 pcs CAN diagnostics

Wiring Diagram



*) Overload protection for supply to peripheral

**) Connect ground to activate the internal CAN terminating resistor

LED Indicators and Connectors

X1-8

X9

As seen from cable entry side

M12 Connectors

	M12 Connector needed:
X1-8: CAN	5 pin, Male A-coded
X9: Power supply & CAN termination	5 pin, Female A-coded
Protective cap for Male M12 *)	Erni 374342
Protective cap for Female M12 *)	Erni 374343

*) Protective caps must be used on unused connectors to reach waterproofness

LEDs

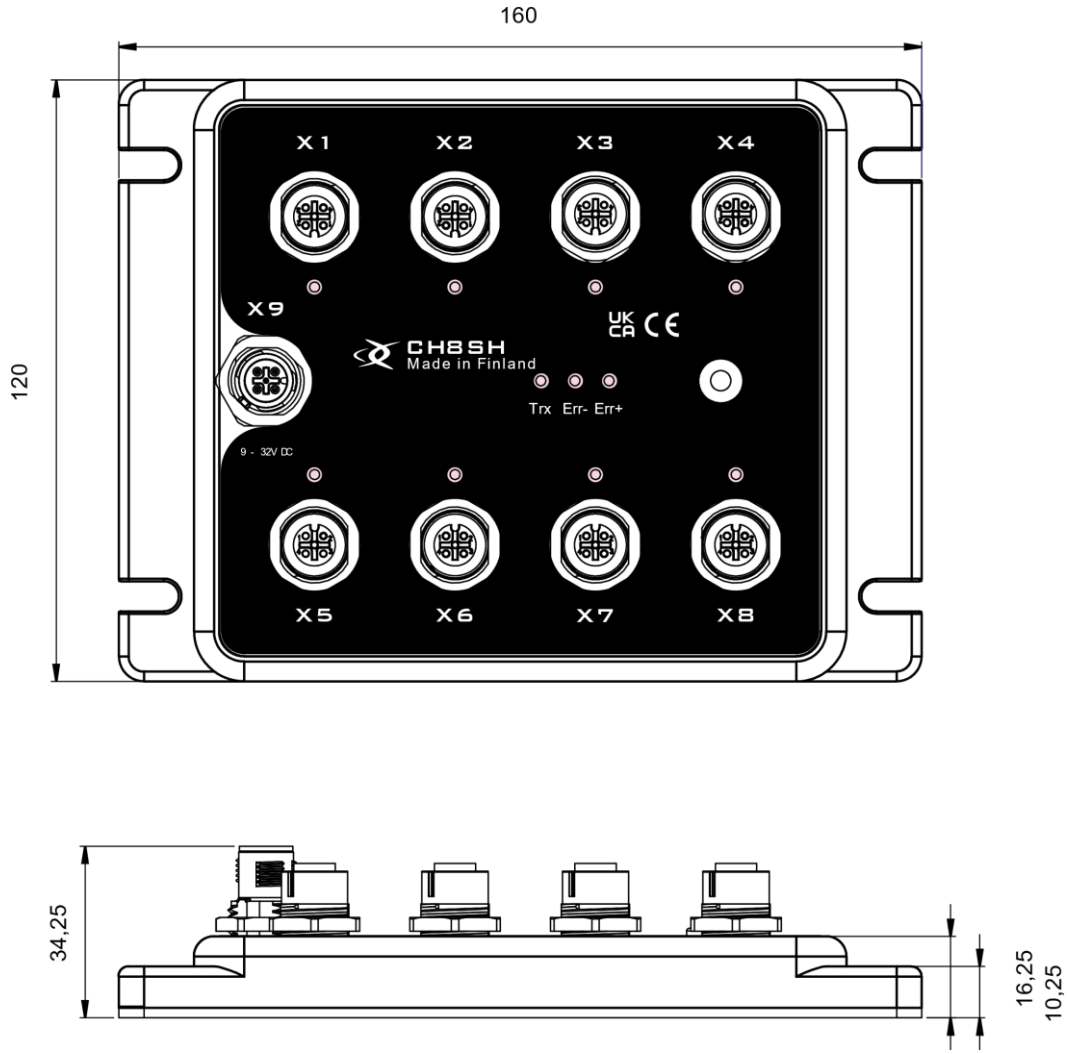
	X1-X8 LED
No supply voltage	Off
Overcurrent / Short circuit	Off
CAN voltage out of normal range	Off
Normal operation	On

	Trx
Normal condition	Flashing
CAN failure	On or Off

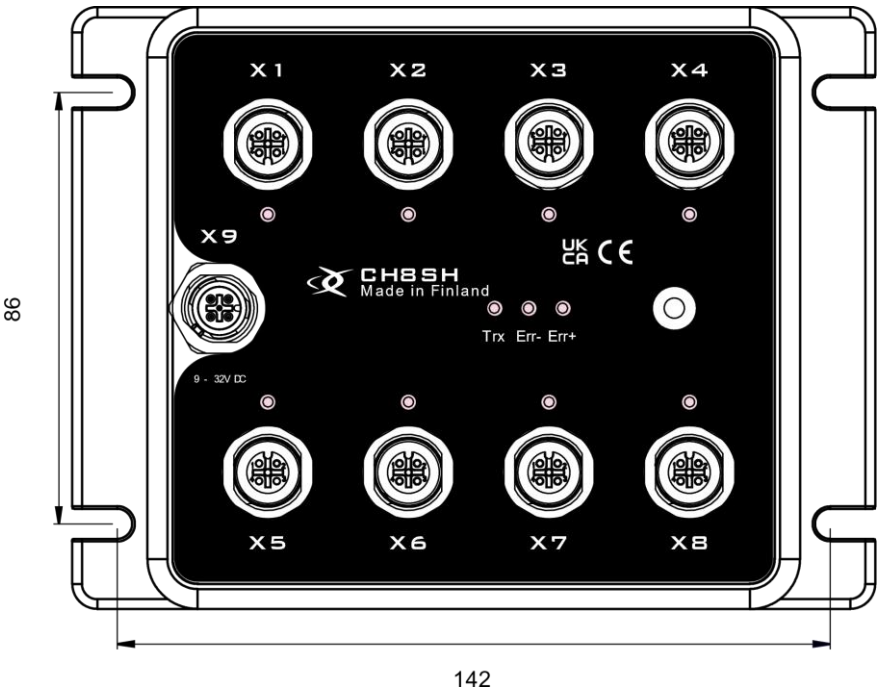
	ERR-
Normal condition	Off
CANL of device is connected to CANH and opposite	On
CANH too low or CANL too high	On

	ERR+
Normal condition	Off
CANL too low or CANH too high	On

Dimensions



Mounting



The preferred mounting position is connectors pointing downwards. If the unit is mounted connectors pointing to the side, then it is vital to leave some loose cable with a downward cue to prevent the ingress of moisture through connector.