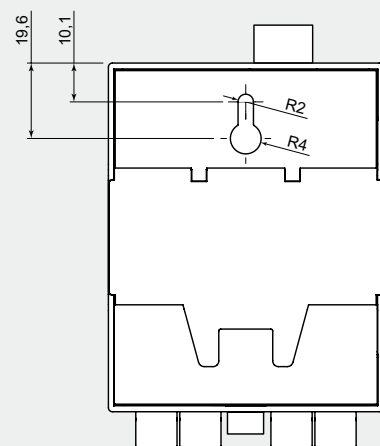
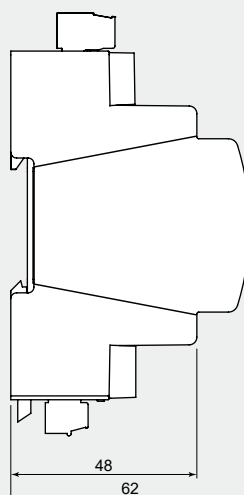
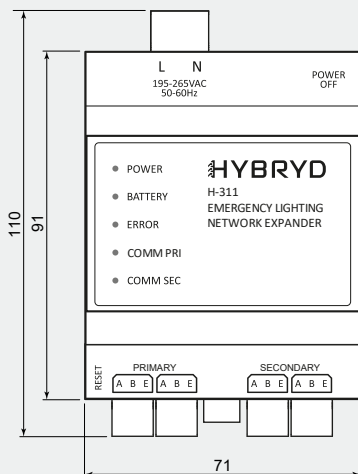
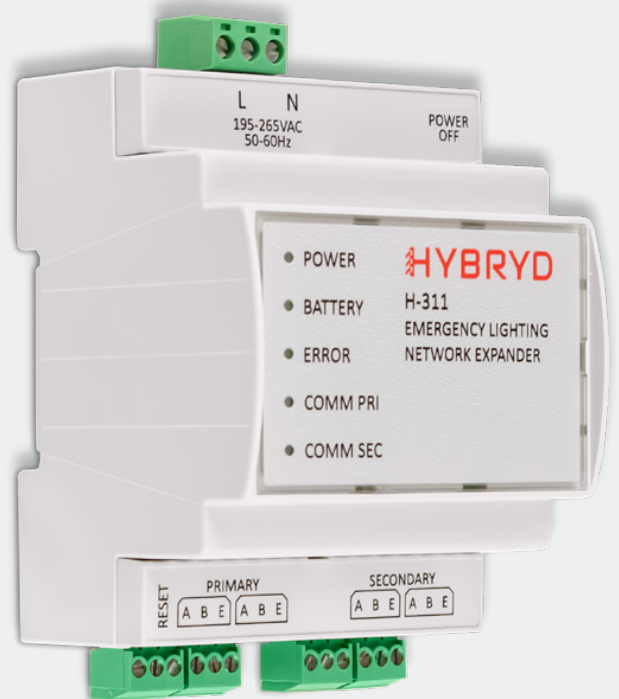


# H-311 EXPANDER



The task of **H-311 expander** is to extend the system communication network with subsequent communication lines, where other H-311 expanders are placed or emergency lighting luminaires made by HYBRYD.

Network interface is equipped in a 10/100Mbps ETHERNET port, where it is connected directly or indirectly via an Ethernet switch to a PC and the two output channels where the network expanders or luminaires (directly to port 2) can be connected.



## TECHICAL DATA

Supply voltage	230V AC 50-60Hz	
Power consumption	< 8VA	
Power factor	0,5	
Electrical protection class	II	
Ingress protection	IP20	
Maximum bus length	CT	1000m
	CT-BUS, CT-LOOP	1200m
Battery	Li-Ion 3,7V / 2,2Ah	

Emergency operation time	>3h
Network technologies	CT; CT-BUS; CT-LOOP <sup>1)</sup>
Ambient temperature	+5°C - +35°C
Installation kind	DIN rail, 4m; Wall <sup>2)</sup>
Power supply cable	0,5 - 1,5mm <sup>2</sup>
Housing	PC/ABS

<sup>1)</sup> Possible configuration in the software, 2x CT-BUS available only in the CTL version

<sup>2)</sup> Power supply terminal must be covered by means of a cable tray

## CONSTRUCTION

The device consists of an ETHERNET interface and a built-in H-311 network expander.

The device elements are placed in a modular housing designed for mounting on a DIN rail or on the wall.

Supplied using two cables (L, N), cable cross section area 0,5 - 2,5mm<sup>2</sup>, supply voltage is 230V AC 50-60Hz.

Internal Lithium Ion battery guarantee more than 3 hours of operation without external power.

On the front of the H-310 unit a label with the built-in network expander MAC address and ETHERNET interface IP address is placed.

## SIGNALLING

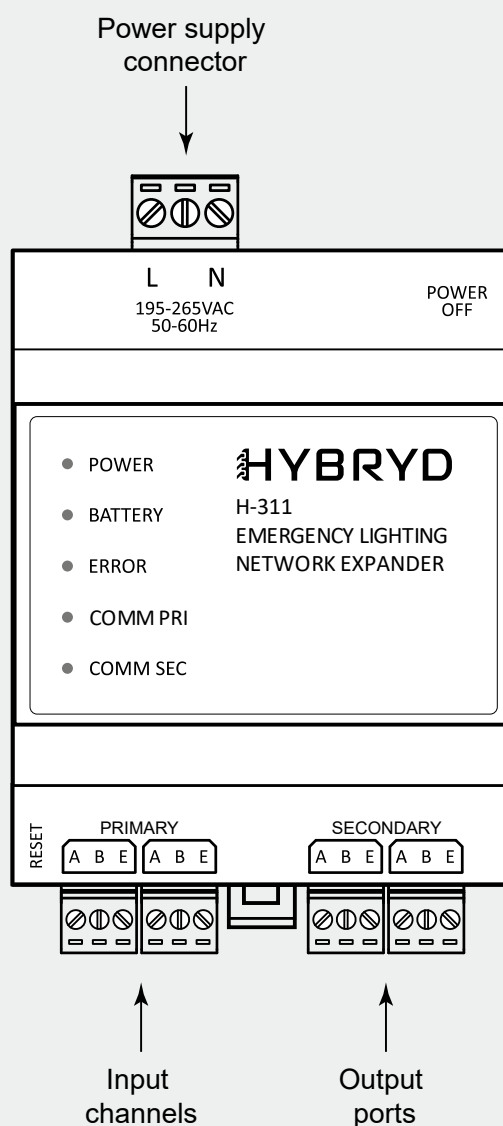
**POWER** - green LED: lights constantly when AC power is present, blinks during power loss (battery supply).

**BATTERY** - green LED: lights constantly - battery fully charged, blinks - battery being charged, turned off - battery not connected.

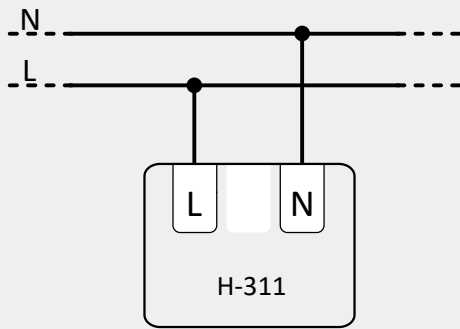
**ERROR** - red LED: lights constantly - network interface operation error or internal battery failure.

**COMM PRI** - green LED: blinks during data transmission between the preceding network device.

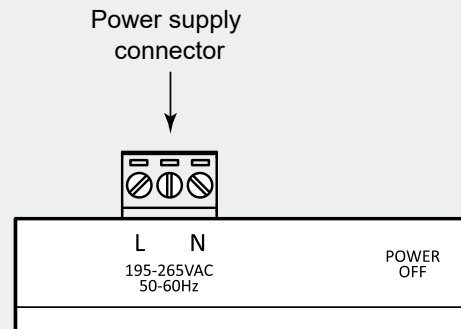
**COMM SEC** - red LED: blinks during data transmission with a secondary device.



## WIRING DIAGRAM



The PE protective conductor of the interface is not required.



The power supply terminal allows for the connection of single and multiple stranded cables with a cross-section area of up to 1.5mm<sup>2</sup>.

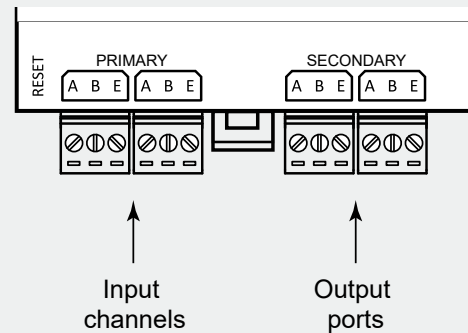
Two-part connectors are used to simplify the installation and reduce the installation time. The interface power supply should be protected. It is recommended to use an overcurrent circuit breaker with rated current 2A and characteristics B.

## COMMUNICATION LINE CONNECTION

The **H-311 network** interface has two independently working communication connections. The first one can work as CT and CT-BUS (PORT2), the second one can work only as CT-BUS (PORT1).

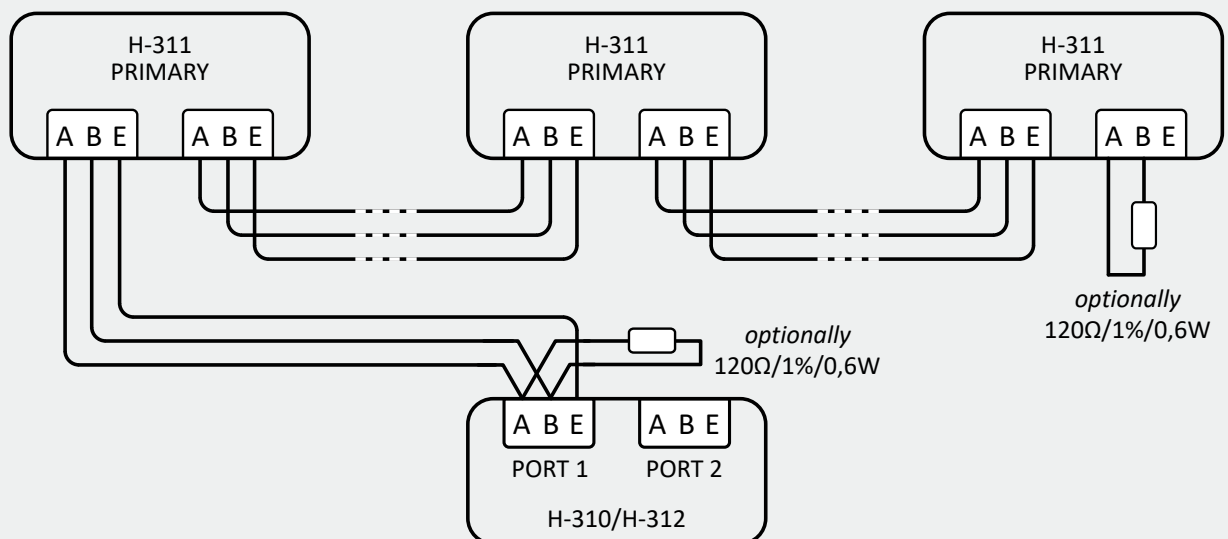
Both connectors can be associated as a CT-LOOP.

Use the YTKSYekw 1x2x0,8 as a communication medium. If a flame-retardant cable is needed use YnTKSYekw 1x2x0,8. In case where the flame-retardant cable is required and can be installed in areas covered by fixed fire-extinguishing systems use HTKSHekw 1x2x0,8.

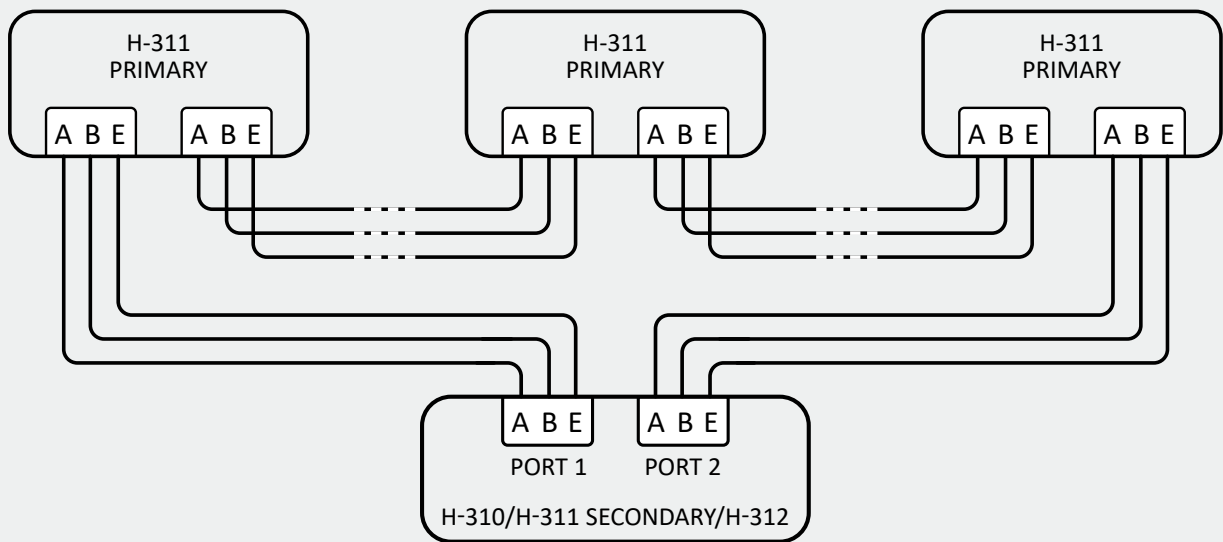


## EXAMPLE OF CONNECTING LINES

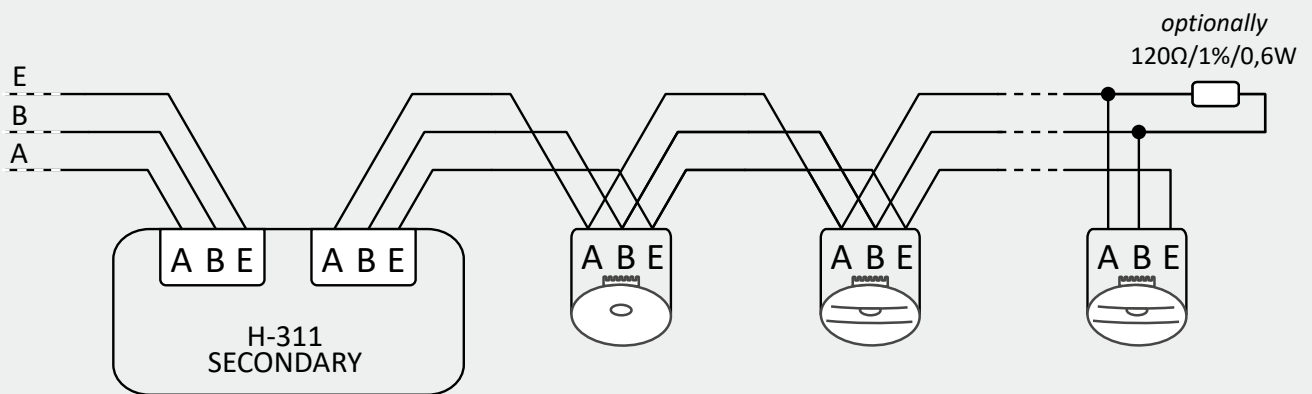
The example connection of the network expander input line for the CT-BUS technology



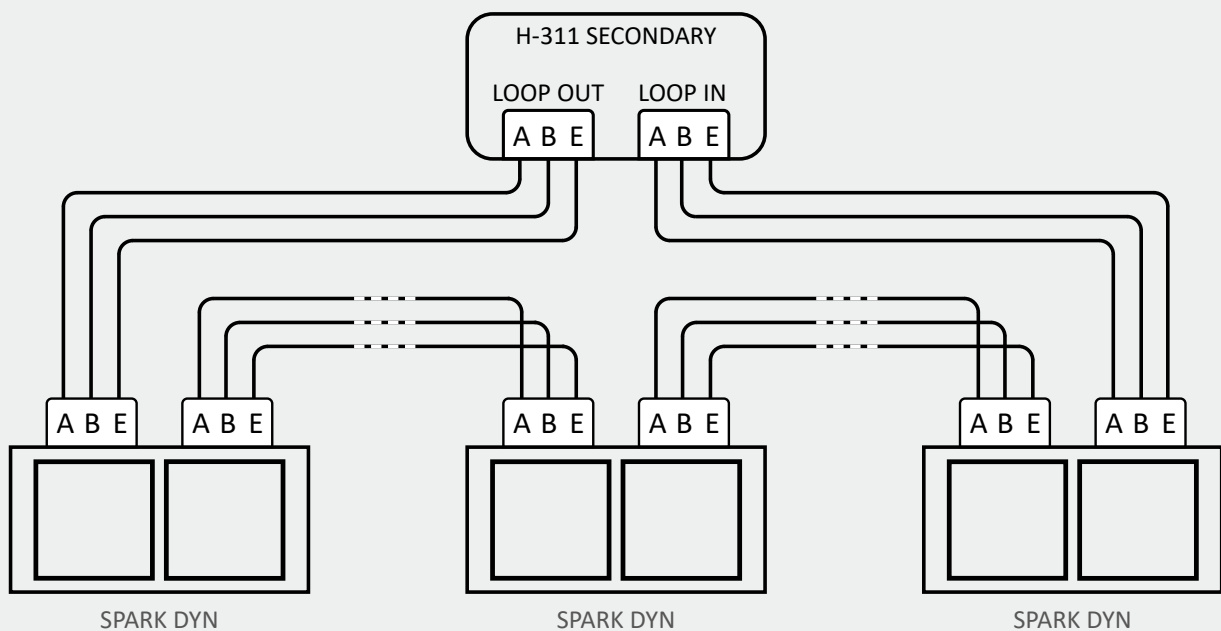
The example connection of the network expander input line for the CT-LOOP technology



The example connection of the network expander output line for the CT-BUS technology



The example connection of the network expander output line for the CT-LOOP technology



## ORDERING

**H-311 0000 - EN - IB - CTB - CTB**

System variant:

**IB** - with battery build-in

Input Port:

**CTB** - CT-BUS communication line

**CTL** - CT-LOOP communication line

Output Port:

**CTB** - CT-BUS communication line

**CTL** - CT-LOOP communication line