



ALBATROS2

LPB/OpenTherm Gateway OCI365.0..

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- Gateway for integrating Boiler Management Units (BMUs) and boiler controllers with OpenTherm (OT) into the Local Process Bus (LPB)

Supported types of controllers

The following types of controllers have been tested and proved to operate successfully in connection with the gateway:

- Albatros2 controllers: RVS43, RVS46, RVS63, RVS21, RVS61, LMS14, LMS15
- BMU (Boiler Management Unit): LMU8
- Non-Siemens BMUs: Such tests are to be made by the OEM

Technical design

The LPB address (addresses 1 through 16) is selected with the rotary selector.

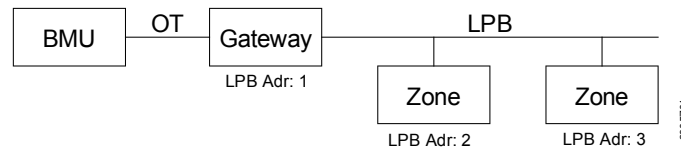
Address 1 is reserved for the LPB master.

Addresses 2 through 16 represent the respective slave units.

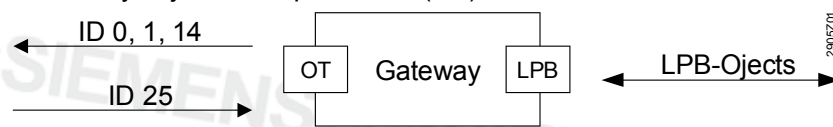
If more than 10 OCI365 are connected to the bus, an additional bus power supply is required (Albatros2 controller with addressing 0)

Single-boiler plant

Gateway address = 1:

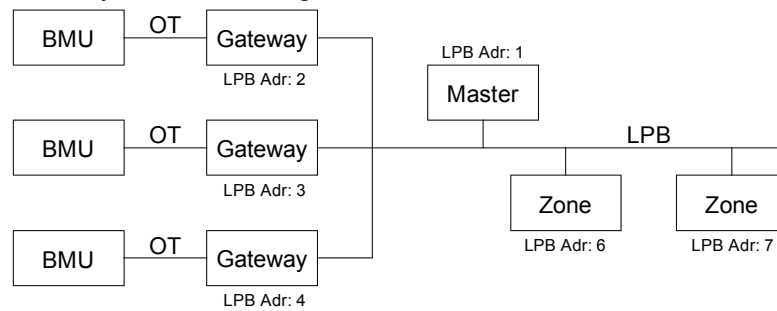


Mandatory objects for OpenTherm (OT):

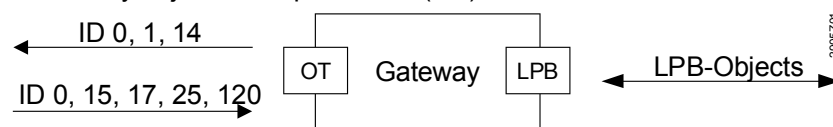


Multiboiler plant

Gateway address 2 or higher:

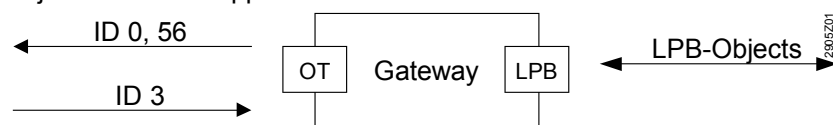


Mandatory objects for OpenTherm (OT):



DHW

In the case of single- or multiboiler applications, the following OpenTherm (OT) objects must be supported for DHW:



Technical data

Power supply	Power is supplied via the OpenTherm bus. LPB and OpenTherm are galvanically isolated. If more than 10 OCI365 are connected an additional bus power supply is required (Albatros2 controller with address 0).	
Functional data	Software class	A
Interfaces, cable lengths	OpenTherm Bus	2-wire connection (interchangeable)
	Max. cable length	50 m
	Cable resistance	max. 2 x 5 Ω
	LPB bus	2-wire connection (non -interchangeable)
	Max. cable length	copper cable 1.5 mm ² : 460 m
	With bus power supply via controller	250 m
With central bus power supply	460 m	
Bus loading number	E = 3	
	For documents containing more detailed information, refer to Basic Documentation CE1P2370	
Degree of protection and safety class	Degree of protection of housing to EN 60 529	IP 20
	Protection class to EN 60529	Low-voltage-carrying parts meet the requirements of safety class II, if correctly installed
	Safety class to EN 60730	Normal contamination
Standards, safety, EMV etc.	CE conformity to	
	EMC directive	89/336/EWG
	- Immunity	- EN 61000-6
	- Emissions	- EN 61000-6-
	Low-voltage directive	73/23/EWG
- Electrical safety	- EN 60950, EN 60925	
Climatic conditions	Storage to IEC721-3-1 class 1K3	temperature -25...70 °C
	Transport to IEC721-3-2 class 2K3	temperature -5...55 °C
	Operation to IEC721-3-3 class 3K5	temperature 0...50 °C
Weight	Weight (excl. packaging)	76 g

OpenTherm (OT) objects

Object no.	Object Description
0	Master Status.CH enable
	Master Status.DHW enable
	Slave status.DHW mode
	Slave status.Flame status
	Slave status.fault indication
1	Control Setpoint
3	Slave configuration.DHW present
5	Application specific fault flags.Lockout reset
	Application specific fault flags.Low water press
	Application specific fault flags. Air press fault
14	Maximum relative modulation level setting
15	Max. boiler capacity & Min. modulation level
17	Relative Modulation Level
25	Boiler water temp.
26	DHW temperature
27	Outside temperature
48	DHW Setpoint Bounds
56	DHW setpoint
70	Status ventilation/heat-recovery.Fault indication
120	Burner operation hours

Error code on LPB

Errors	Code	Prio	Cause
No BMU connected	147	9	No OT communication
Safety limit thermostat lockout	110	9	ID 5 (Application specific fault flags. Lockout reset)
Wrong air supply	129	9	ID 5 (Application specific fault flags. Air press fault) Air press fault)
Water pressure too low	118	6	ID 5 (Application specific fault flags. Low water press)
BMU error	150	6	ID 0 (Slave status. Fault indication) ID 70 (Status ventilation/heat-recovery. Fault indication)
LPB address collision	82	3	Tg received with adresser = own LPB-adress and SourceType = controller

Notes

Mounting

The gateway is designed for mounting on DIN rails.

Mounting location:

- Boiler
- Control panel
- Housing for wall mounting

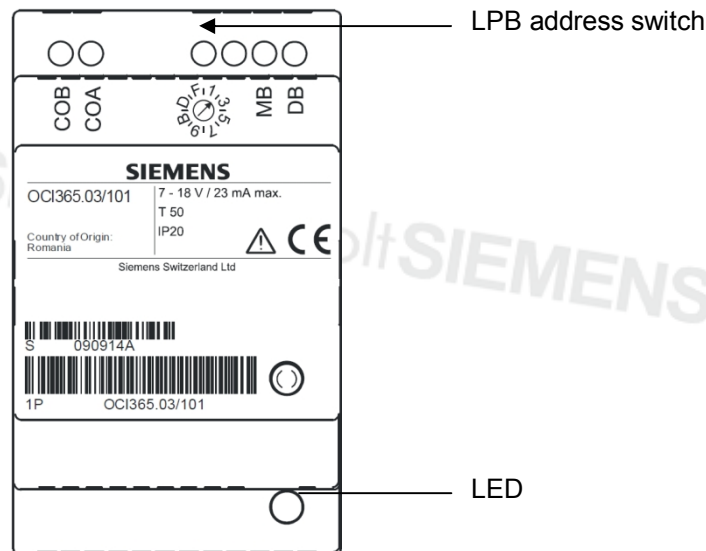
Indication via LED

The gateway's operating state is indicated by a green LED.

- In normal operating state, the LED briefly flashes each time communication takes place
- In the event the LPB has a short-circuit or open-circuit (no power supply), or when communication with the BMU is not possible, the LED is steady on.

Other malfunctions can only be transmitted and indicated via LPB (service tool, Albatros controllers featuring operation).

Connections



The bus connections (LPB and OT) are in the form of screw terminals. There are 2 terminals for each type of bus:

LPB (non-interchangeable)	DB	Data connection
	MB	Ground connection
OpenTherm (interchangeable)	COA	Connection A
	COB	Connection B

Dimensions

