



Climatix™

Climatix MBus module

POL907.00/xxx

MBus module will map the required data points from the MBus devices to POL6xx.xxx controllers.

The MBus module offers the following features:

- In the MBus network the MBus module acts as MBus master and requests periodically data points from the MBus devices.
- The MBus mapping in the MBus module defines all MBus devices and their required data points (bindings), that will be integrated and mapped to the controller.
- Up to 6 MBus devices, such as heat, water or electricity meters, can be directly connected to the MBus module (up to 64 MBus devices with MBus repeater)
- Up to 200 data points (bindings) can be defined in the MBus mapping of the MBus module.
- Connection of the MBus module to the MBus network is galvanically separated via optocoupler. The bus power supply is short-circuit-proof
- The MBus module must be connected to the left side of a POL6xx.xxx controller

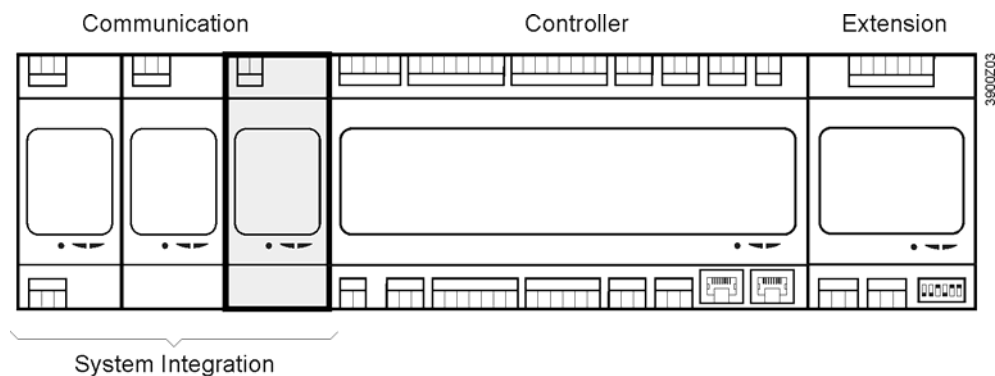
The MBus module is part of the Climatix product range (also refer to Data Sheet 3900 and Mounting Instructions M3910).

The MBus

The MBus (Meter bus) is a European standard for remote readout of heat meters. It is also suited for use with all other types of consumption meters plus various sensors and actuators.

With its standardization as a galvanic interface for remote readout of heat meters, this bus will become more and more important for the energy industry. For more information about the MBus, visit www.MBus.com.

Installation concept







Technical data

General data

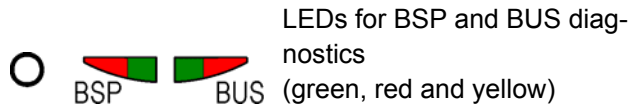
Dimensions	W x H x D: 45 x 110 x 75 mm
Weight excl. packaging	100 g
Base	Plastic, pigeon-blue RAL 5014
Housing	Plastic, light-grey RAL 7035
Power supply	Via system interface from controller DC 5 V (+5% / -5%), max. 400 mA

MBus

MBus interfaces	Plug-in terminals MP+ / MP- Galvanically isolated by optocoupler 2 wires, not interchangeable
Number of MBus devices	Without repeater, direct connection: - Max. 6 MBus devices (6 standard loads of 1.5 mA) With external MBus repeater: - Up to 64 MBus devices (min. 59 MBus devices via repeater)
Number of data points (bindings)	Max. 200 data points can be integrate over the MBus module to the controller
MBus mapping (Detailed description in the online help of the SAPRO tool)	Configuration of the mapped MBus devices and their required data points (bindings) has to be done with the Scope tool.
Manufacturer specific data structures (DIF=0Fh)	Manufacturer specific data structures (DIF=0Fh) can not be mapped to the controller.
Baud rate	300 / 600 / 1200 / 2400 / 4800 / 9600 baud
Type of addressing	Primary addressing using the addresses from 1 to 250. Indirect addressing will not be supported.

Connection terminals  Example FKCT	Equipped with plug (standard)	1 Phoenix FKCT 2,5 /2-ST
	For other types of plug (optional), refer to PolyCool range document 3900 (CB1Q3900en_xx)	
	Solid wire	0.5...2.5 mm ²
	Stranded wire (twisted or with ferrule)	0.5...1.5 mm ²
COMM interface plug	Board-to-board	ZEC1,0/10-LPV-3,5 GY35AUC2CI1
	  Board-to-board connector 	
System interface	Equipped with board-to-board plug	ZEC1,0/4-LPV-3,5 GY35AUC2CI1
Cable types	MBus	Refer to MBus Manual
Environmental conditions	Operation	IEC 721-3-3
	Temperature	-40...+70 °C
	Humidity	< 90 % r.h.
	Atmospheric pressure	Min. 700 hPa, corresponding to max. 3,000 m above sea level
	Transport	IEC 721-3-2
	Temperature	-40...70 °C
Humidity	<95% r.h.	
Atmospheric pressure	Min. 260 hPa, corresponding to max. 10,000 m above sea level	
Protection	Degree of protection	IP20 (EN 60529)
Standards	Product safety	
	Automatic electrical controls	EN 60730-1
	Electromagnetic compatibility	
	Immunity	EN 60730-1 +A16
	Emissions	EN 60730-1 +A16
	CE conformity	
	EMC directive	2004/108/EC
	Low-voltage directive	2006/95/EC
	Listings	UL916, UL873 CSA C22.2M205
	RoHS directive	2002/95/EC (Europe) ACPEIP (China)
Ordering data	Climatix MBus module	POL907.00/STD

MBus LEDs for diagnostics



Mode	BUS LED status
MBus running and communication ok	Green on
At least one MBus device is not running	Yellow on
No MBus device is running	Red on

Mode	BSP LED status
BSP running and communication with controller	Green on
BSP running but no communication with controller	Yellow on
BSP error (software error)	Red blinking at 2 Hz

Commissioning notes

- Meter setting
- Prior to connecting the MBus module, the following meter settings must be made:
- Primary address from 1 to 250 (physical address)
- Baud rate 300 / 600 / 1200 / 2400 / 4800 / 9600 baud
- Enabling the required data, storage no. = 0, tariff = 0
- Energy in kWh
 - Volume in m³
 - Power in W
 - Flow rate in l/h
 - Flow temperature in °C
 - Return temperature in °C
- Enabling the required data, storage no. = 1, tariff = 0
- Date of set day: Day, month, (year)
 - Energy in kWh on the set day
 - Volume in m³ on the set day

Engineering notes

- The MBus module is attached to the controller with a board-to-board connector
- The connection to the MBus is made via the T1 port
- For service, use the MBus service button

Disposal notes



The module contains electrical and electronic components and must not be disposed of together with household waste.

Local and currently valid legislation must be observed!

Layout of POL907.00/xxx communication module

