



Climatix™

Climatix communication Advanced Web and BACnet module

POL909.80/STD

Equipped with 64 MB of flash memory, 64 MB of SDRAM

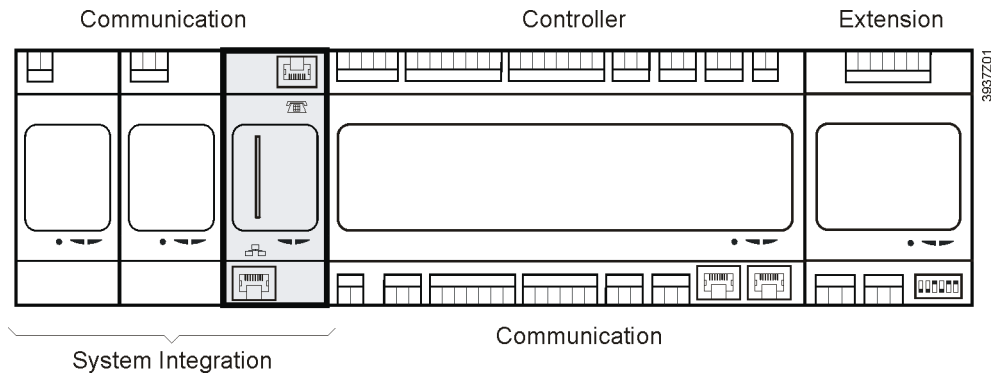
Communication module to enable Web functionality and connect a POL6xx.xx controller to a BACnet IP and/or Modbus IP network.

- The POL909.80/STD communication module offers the following features:
 - Internet-based device powered by ARM926EJ-S™ ARM® Thumb® Processor
 - Embedded WindowsCE® platform with Web server application
 - Generic tree view to read and write data points
 - Platform to program Web applications
 - Integration into a building automation and control system via BACnet IP
 - Client communication to other BACnet devices
 - Preloaded generic BACnet server
 - Supports BACnet/IP (B-AAC profile and BBMD)
 - Supports Modbus IP Server mode
 - Network parameters configurable via controller, HMI, SCOPE or Web
 - The module must be connected to the left side of a POL6xx.xx controller
 - Alarm server for SMS / mail
 - Peer-to-peer communication
 - RAS server
 - Full modem RS-232 port (GSM / GPRS support, Dial in and dial out)

The POL909.80/STD communication module is part of the Climatix product range (also refer to Data Sheet 3900 and Mounting Instructions M3910 and BACnet PICS document P3939en).

The BACnet IP protocol	BACnet, an ASHRAE building automation and control networking protocol, was designed specifically to meet the communication needs of building automation and control systems for applications such as heating, ventilation, and air conditioning control, lighting control, access control, and fire detection systems and their associated equipment. The BACnet protocol provides mechanisms by which computerized building automation devices can exchange information, regardless of the particular building service they perform. As a result, the BACnet protocol may be used by head-end workstations, general-purpose direct digital controllers, and application-specific or unitary controllers with equal effect.
The Modbus IP protocol	<p>Modbus is an application layer messaging protocol, positioned at level 7 of the OSI model, which provides client/server communication between devices connected on different types of buses or networks, defined by the Modbus Organization. The Modbus Organization is a group of independent users and suppliers of automation devices that seeks to drive the adoption of the Modbus communication protocol suite and the evolution to address architectures for distributed automation systems across multiple market segments.</p> <p>The Modbus IP Server mode on POL909.80 is supported in tunnel mode to Climatix C600 controllers. Starting with POL909.80 module BSP version V11.42.</p>
Advanced Web and BACnet module (AWB)	<p>The advanced Web and BACnet module extends the communication capabilities of the Climatix controllers. It communicates using different protocols that can be loaded to the embedded WindowsCE platform.</p> <p>With the preloaded WindowsCE operating system, all network address parameters can be set statically, handled by a DHCP server or, if nothing is present, negotiated by the AutoIP functionality of the operating system.</p> <p>To manage the device, a set of Web-based extensions for the Web server are loaded to download files to access the registry or handle processes.</p> <p>Unlike other solutions, the AWB can be handled in managed and unmanaged networks.</p>
Functions	The advanced Web and BACnet module is an Internet-based device powered by ARM926EJ-S™ ARM® Thumb® Processor. Equipped with 64 MB of flash memory, 64 MB of SDRAM, the possibility of using SD-card and preloaded with WindowsCE operating system, the AWB is a powerful starting point for an Internet or communication application. To allow access to local area networks, the onboard Ethernet controller provides the flexibility to integrate this device into networks.
Software Web server	The Web server with its BGI capabilities and the remote management extensions (RMS) enable the user to implement and load his own Web pages and extend them with programmed Web functions. Using the RMS, all pages can be loaded to the file system. No more recompilations or firmware setup is needed. The access to certain pages can be granted based on user or group policies.
Generic tree view	The preloaded generic tree view application always reflects the loaded control program. After a modification of the controller application, only one restart is necessary to enable the operation of data points inside a Web browser. With the Java technologies used, this operation always shows the actual process data of the Climatix controller.

Installation concept



Technical data

General data

Dimensions	W x H x D: 45 x 110 x 75 mm
Weight excl. packaging	102 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. 270 mA
Microprocessor	ARM926EJ-S™ ARM® Thumb® Processor, 400MHz
Memory	64 MB NAND FLASH (3,3 V) 64 MB SDRAM (133MHz) SD-Card Support
Data connectivity	- 10BaseT Ethernet, with link detection - Modem
Connectors:	
RJ45-10BaseT Ethernet	with link detection
RJ45-RS-232 serial	with full modem support
Flash programming	JTAG support through CPU, download via Ethernet
Software	
Operating system	Windows CE 6.0
Storage	FlashFile System
Web server	With BGI extension and access security
RMS	Remote management for file handling, process management and registry
Generic treeview	Out of the box operation of loaded HVAC applications



SD-Card up to 8 GB

BACnet IP / Modbus IP

Ethernet 10/100 Mbit (IEEE 802.3U)	
Cable connection	RJ45 jack, 8 pins
BACnet IP interface	Supports B-BC and BBMD profile
Modbus IP interface	Supports Modbus IP Server mode

Modem port

Cable connection RS-232	RJ45 jack, 8 pins Support of GSM, GPRS Modems
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COMM interface plug

Board-to-board

ZEC1,0/10-LPV-3,5 GY35AUC2CI1



Board-to-board
connector



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)
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Directives, standards and approvals

Product standard	EN 60730-1 Automatic electrical controls for household and similar use
Electromagnetic compatibility (applications)	For use in residential, commerce, light-industrial and industrial environments.
EU conformity (CE)	CB1T3930xx *)
RCM conformity (EMC)	CB1T3909en_C1 *)
Listings	UL916, UL873 http://data-base.ul.com/ CSA Class 4812 http://www.csagroup.org

Environmental compatibility

Product environmental declaration CB1E3950_01 *) (contains data on RoHS compliance, materials composition, packaging, environmental benefit, disposal)

*) The documents can be downloaded from <http://siemens.com/bt/download>.

Ordering data

Climatix advanced Web and BACnet module POL909.80/STD

**Advanced Web module
LEDs for diagnostics**



LEDs for BSP and BUS diagnostics
(green, red and yellow)

Mode	BUS LED status
BACnet IP running and communication ok	Green on
Startup	Yellow on
Hardware/Software error	Red on
Application update	Green/Red blinking at 1 Hz

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
BSP updating	Green/Red blinking at 1 Hz

Engineering notes

- The communication module is attached to the controller with a board-to-board connector
- The connection to Ethernet is made via the T-IP port (RJ45 jack)

Disposal notes

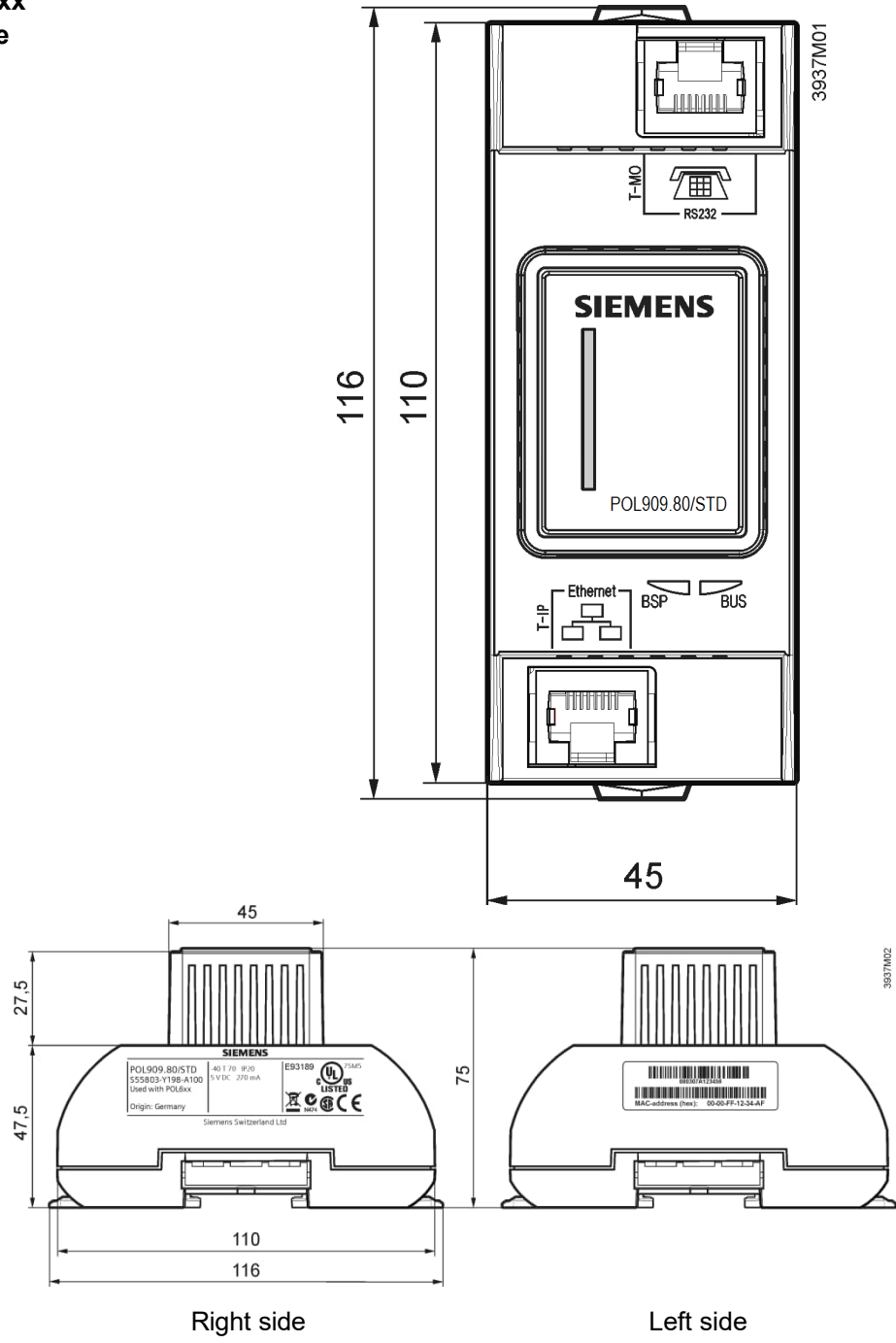


The devices are considered electronics devices for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic garbage.

- Dispose of the devices through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Dimensions

Layout of POL909.50/xxx communication module



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