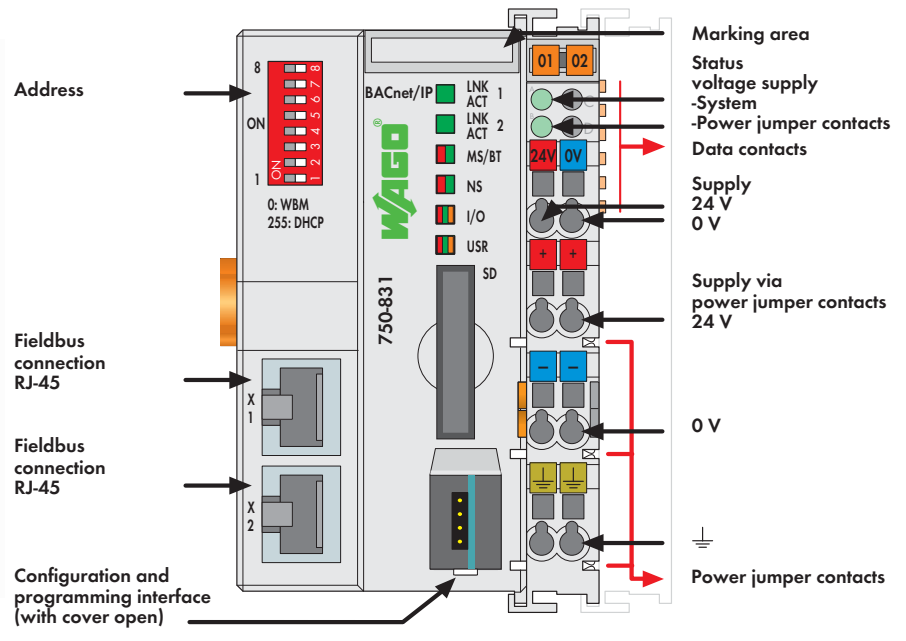


1 BACnet/IP Programmable Fieldbus Controller

20 32-bit CPU, multitasking



The 750-831 BACnet/IP Controller connects the WAGO I/O-SYSTEM to the BACnet protocol. The 750-831 Controller supports the B-BC BACnet device profile according to DIN EN ISO 16484-5. It communicates with other BACnet devices via BACnet/IP.

- The controller provides the three following functionalities:
- 1. Native server: For each channel, appropriate BACnet objects are generated automatically for the digital/analog input and output modules that are connected to the controller.
 - 2. Application server: Other supported BACnet objects can be created via IEC 61131-3 programming environment and made available to a BACnet network.
 - 3. Application client: Using the client functionality, objects and their properties can be accessed by other BACnet devices.

Two ETHERNET interfaces and an integrated switch allow the fieldbus to be wired in a line topology. This eliminates additional network devices, such as switches or hubs. Both interfaces support Auto-Negotiation and Auto-MDI(X). The DIP switch configures the last byte of the IP address and may be used for IP address assignment.

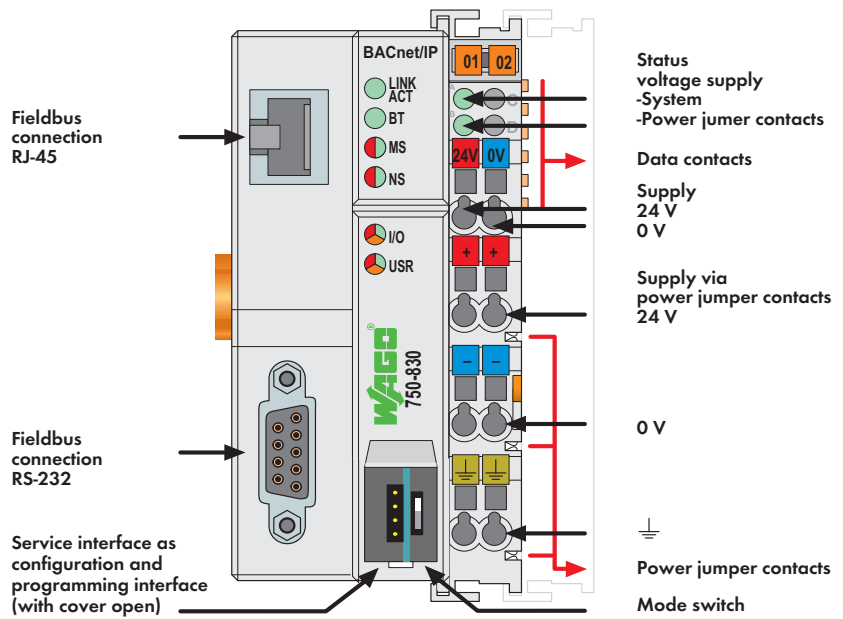
An integrated Web server provides configuration options to the user, while displaying controller's status information. The IEC 61131-3 programmable controller is multitasking-capable and features a battery-backed RTC. A data memory of 1 MB is available. The 750-831 Controller has a slot for a removable memory card, allowing device parameters or files (e.g., boot files) to be transferred from one controller to another. The memory card can be accessed via FTP and be used as an additional drive. Start-up and configuration of the BACnet networks is performed using the Windows-compliant WAGO BACnet Configurator.

Description	Item No.	Pack. Unit
BACnet/IP Controller	750-831	1
Accessories		
WAGO BACnet configurator	see Full Line Catalog AUTOMATION 2012/2013 Download: www.wago.com	
WAGO I/O-PRO V2.3, RS-232 kit	759-333	1
Miniature WSB Quick marking system		
plain	248-501	5
with marking	see Full Line Catalog AUTOMATION 2012/2013	
SD memory card, 1 GB	758-879/000-001	1
Approvals		
BACnet approvals		
WSPCert certification	pending	
BTL listing	pending	
Conformity marking	CE	

System Data	
No. of controllers connected to Master	limited by ETHERNET specification
Transmission medium	Twisted Pair S-UTP 100 Ω, Cat 5; Max. line length: 100 m
Baud rate	10/100 Mbit/s
Transmission performance	Class D acc. to EN 50173
Buscoupler connection	2 x RJ-45
Protocols	BACnet/IP, MODBUS/TCP (UDP), HTTP, BootP, DHCP, DNS, SNTP, FTP, SNMP
Programming	WAGO I/O-PRO V2.3
IEC 61131-3	IL, LD, FBD, ST, FC
SD card slot	Push-push mechanism, sealable cover lid
Type of memory card	SD and SDHC up to 32 GB (All guaranteed properties are only valid in connection with the WAGO 758-879/000-001 memory card.)
BACnet device profile	B-BC (BACnet Building Controller)
BACnet version	1.7

PLC - BACnet/IP Programmable Fieldbus Controller

32-bit CPU, multitasking



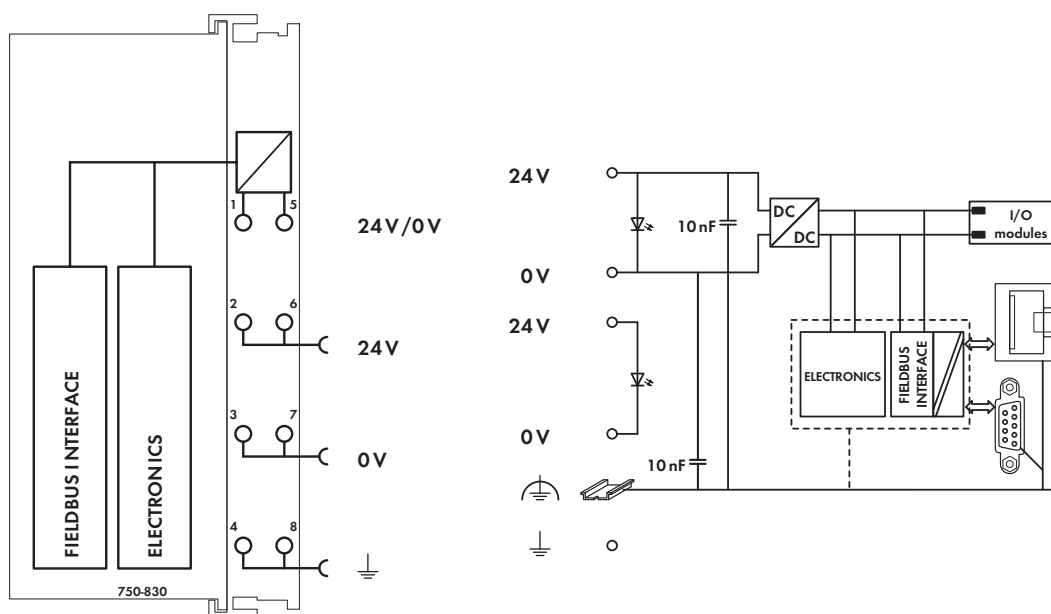
The 750-830 BACnet PLC connects the WAGO-I/O-SYSTEM to the BACnet protocol. The 750-830 controller corresponds to BACnet B-BC device profile according to DIN EN ISO 16484-5. The controller provides the three following functionalities:

1. Native server: For each channel, appropriate BACnet objects are generated automatically for the digital and analog I/O modules that are connected to the controller.
2. Application server: Other supported BACnet objects can be created via IEC -61131-3 programming environment.

3. Application client: Using the client functionality, objects and their properties can be accessed by other BACnet devices. Access to BACnet/IP networks is provided by the controller's RJ-45 interface. The integrated RS-232 interface communicates with external devices. The controller can also be addressed as Modbus RTU slave via RS-232 interface. Programming PLC applications is performed in compliance with IEC 61131-3. The controller has a battery-backed RTC and 32-bit multitasking CPU. For Web-based applications, HTML pages can be generated on an internal server. Start-up and configuration of the BACnet networks is performed using the Windows-compliant WAGO BACnet Configurator.

Description	Item No.	Pack. Unit
BACnet/IP Controller	750-830	1
Accessories		
PC software WAGO BACnet configurator	see page 92	
WAGO-I/O-PRO V2.3, RS-232 kit	759-333	1
Miniature WSB Quick marking system		
plain	248-501	5
with marking	see pages 352 ... 353	
Approvals		
Also see "Approvals Overview" in Section 1		
BACnet approvals		
WSPCert certification	ISO 16484-5:2010	
BTL listing	BTL (BACnet® Testing Laboratories)	
Conformity marking	CE	
Shipbuilding	ABS, DNV, GL, KR	
UL 508		
ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4	
EN 60079-0, -15	I M2 / II 3 GD Ex nA IIC T4	
EN 61241-0, -1		

System Data	
System data ETHERNET:	
No. of controllers	limited by network topology
Transmission medium	S-UTP 100 Ω Cat 5
Max. length of fieldbus segment	100 m limited by IEEE 802.3
Max. length of network	acc. to IEEE 802.3 standard
Baud rate	10/100 Mbit/s
Buscoupler connection	RJ-45
Protocols	BACnet/IP, MODBUS/TCP (UDDP), HTTP, BootP, DHCP, DNS, SNTP, FTP, SNMP V1, SMTP
System data Serial:	
Transmission medium	Shielded Cu cable 2 (4) x 0.25 mm ²
Max. length of fieldbus segment	15 m depending on baud rate/cable (at 19200 baud)
Baud rate	9600 baud ... 115 200 baud
Buscoupler connection	1 x D-Sub 9; socket
Programming	WAGO-I/O-PRO V2.3
IEC 61131-3	IL, LD, FBD (CFC), ST, FC
BACnet device profile	B-BC (BACnet Building Controller)
BACnet-Revision	1.7



Technical Data	
Number of I/O modules	64
with bus extension	250
Configuration	via PC
Program memory	512 Kbytes
Data memory	256 Kbytes
Non-volatile memory (retain)	24 Kbytes (16 Kbytes retain, 8 Kbytes flag)
Flash	4.5 Mbytes
Power supply	24 V DC (-25 % ... +30 %)
Max. input current (24 V)	500 mA
Efficiency of the power supply	87 %
Internal current consumption (5 V)	300 mA
Total current for I/O modules (5 V)	1700 mA
Isolation	500 V system/supply
Voltage via power jumper contacts	24 V DC (-25 % ... +30 %)
Current via power jumper contacts (max.)	DC10 A DC A
BACnet implementation acc. to	DIN EN ISO 16484-5 =ANSI/ASHRAE 135-2004
Fieldbus (Modbus/TCP):	
Max. input process image	2 Kbytes
Max. output process image	2 Kbytes
Max. input variables	512 bytes
Max. output variables	512 bytes

General Specifications	
Operating temperature	0 °C ... +55 °C
Wire connection	CAGE CLAMP®
Cross sections	0.08 mm² ... 2.5 mm² / AWG 28 ... 14
Stripped lengths	8 ... 9 mm / 0.33 in
Dimensions (mm) W x H x L	51 x 65 x 100
	Height from upper-edge of DIN 35 rail
Weight	200 g
Storage temperature	-25 °C ... +85 °C
Relative air humidity (no condensation)	95 %
Vibration resistance	acc. to IEC 60068-2-6
Shock resistance	acc. to IEC 60068-2-27
Degree of protection	IP20
EMC: CE - immunity to interference	acc. to EN 61000-6-2 (2005)
EMC: CE - emission of interference	acc. to EN 61000-6-3 (2007)
EMC: marine applications	
- immunity to interference	acc. to Germanischer Lloyd (2003)
EMC: marine applications	
- emission of interference	acc. to Germanischer Lloyd (2003)