

# BACnet/IP Programmable Fieldbus Controller

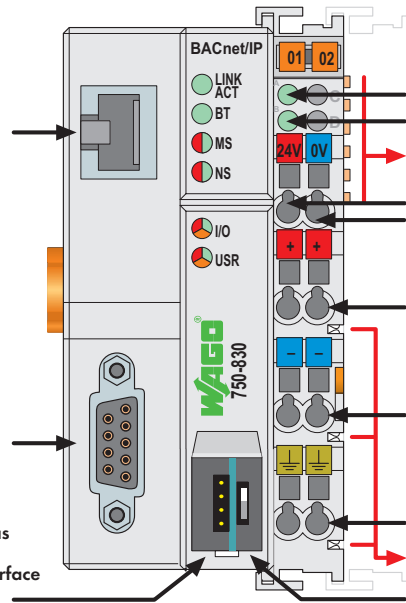
10/100 Mbits/s; digital and analog signals



Fieldbus connection RJ-45

Fieldbus connection RS-232

Service interface as configuration and programming interface (with cover open)



Status voltage supply  
-System  
-Power jumper contacts

Data contacts

Supply  
24 V  
0 V

Supply via power jumper contacts  
24 V

0 V

⊥

Power jumper contacts

Mode switch

The 750-830 BACnet Controller connects the WAGO-I/O-SYSTEM with 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:

- 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.
- Application server: Other supported BACnet objects can be created via IEC 61131-3 programming environment.
- 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 RS-232 interface can be used as standard RS-232 or as BACnet-PTP connection to other PTP-capable BACnet devices.

For the 750-830 controller, application programming is completed in accordance with IEC 61131-3.

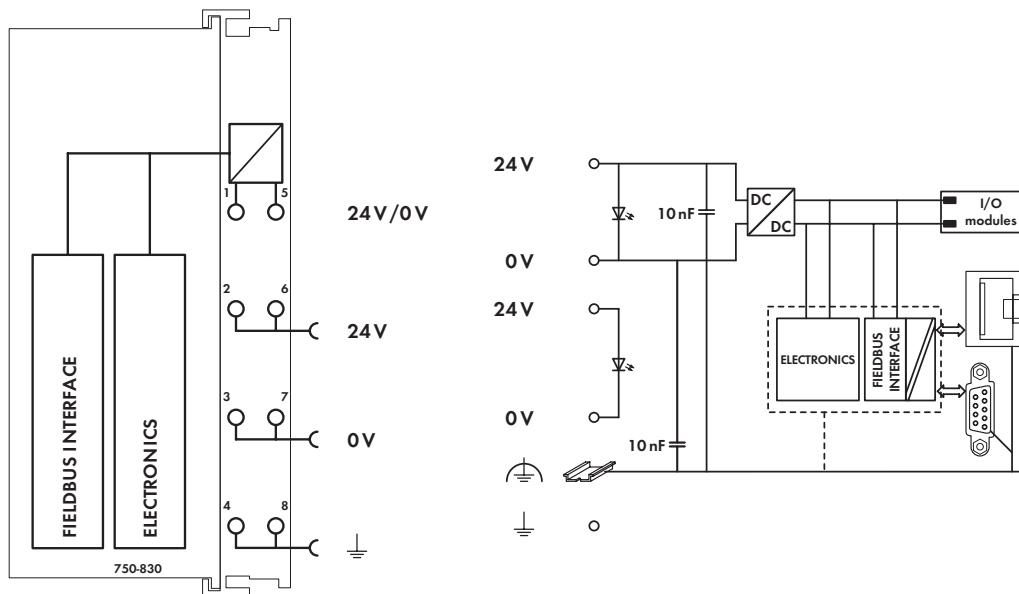
The controller, based on a 32-bit CPU, is capable of multitasking and has a battery-backed, real-time clock.

HTML pages can be placed on an internal server for use in Web-based applications.

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
<b>Accessories</b>		
<b>Miniature WSB Quick marking system</b>		
	plain	248-501 5
	with marking	see Full Line Catalog 08/09 Volume 3, Section 1
PC software	WAGO BACnet configurator	
<b>Approvals</b>		
Conformity marking	CE	
UL 508		
EN 60079-15	I M2 / II 3 GD Ex nA IIC T4	
BACnet conformity test	BACnet conformity (pending)	
Marine applications	GL	

System Data	
<b>System data ETHERNET:</b>	
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 Mbits/s
Buscoupler connection	1 x RJ-45, 1 x RS-232
Protocols	BACnet/IP, BACnet PTP, MODBUS/TCP (UDP), HTTP, BootP, DHCP, DNS, SNTP, FTP, SNMP v1, SMTP
<b>System data Serial (BACnet PTP):</b>	
Baud rate	9600 baud ... 115 200 baud
Max. length of fieldbus segment	15 m depending on baud rate/cable (at 19200 baud)
Buscoupler connection	1 x D-Sub 9; socket
Programming	WAGO-I/O-PRO CAA
IEC 61131-3	IL, LD, FBD (CFC), ST, FC
BACnet device profile	B-BC (BACnet Building Controller)



Technical Data		General Specifications	
Number of I/O modules	64	Operating temperature	0 °C ... +55 °C
with bus extension	250	Wire connection	CAGE CLAMP®
Configuration	via PC	Cross sections	0.08 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> / AWG 28 ... 14
Program memory	512 Kbytes	Stripped lengths	8 ... 9 mm / 0.33 in
Data memory	256 Kbytes	Dimensions (mm) W x H x L	51 x 65 x 100
Non-volatile memory (retain)	24 Kbytes		Height from upper-edge of DIN 35 rail
	(16 Kbytes retain, 8 Kbytes flag)	Weight	188 g
Voltage supply	DC 24 V (-25% ... +30%)	Storage temperature	-25 °C ... +85 °C
Max. input current (24 V)	500 mA	Relative air humidity (no condensation)	95 %
Efficiency of the power supply	87 %	Vibration resistance	acc. to IEC 60068-2-6
Internal current consumption (5 V)	300 mA	Shock resistance	acc. to IEC 60068-2-27
Total current for I/O modules (5 V)	1700 mA	Degree of protection	IP20
Isolation	500 V system/supply	EMC $\text{CE}$ -Immunity to interference	acc. to EN 61000-6-2 (2005)
Voltage via power jumper contacts	DC 24 V (-25% ... +30%)	EMC $\text{CE}$ -Emission of interference	acc. to EN 61000-6-3 (2007)
Current via power jumper contacts (max.)	DC 10 A	EMC marine applications -	
BACnet implementation acc. to	DIN EN ISO 16484-5 =	Immunity to interference	acc. to Germanischer Lloyd (2003)
	ANSI/ASHRAE 135-2004	EMC marine applications -	
		Emission of interference	acc. to Germanischer Lloyd (2003)
<b>Fieldbus (MODBUS/TCP):</b>			
Max. input process image	2 Kbytes		
Max. output process image	2 Kbytes		
Max. input variables	512 bytes		
Max. Output variables	512 bytes		