## 750-830

# PLC - BACnet/IP Programmable Fieldbus Controller

**32-bit CPU, multitasking**



Fieldbus connection RJ-45

Fieldbus connection RS-232

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

BACnet/IP

LINK ACT
BT
MS
NS

I/O
USR

Status
voltage supply
-System
-Power jumer contacts

Data contacts

Supply
24 V
0 V

Supply via power jumper contacts 24 V

0 V

Power jumper contacts

Mode switch
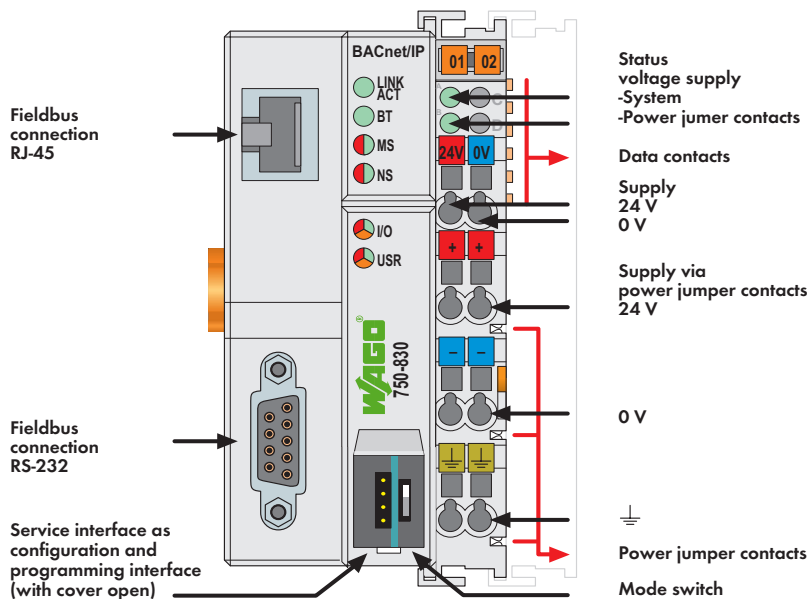
The 750-830 BACnet PLC connects the WAGO-I/O-SYSTEM to the BACnet protocol.
The 750-830 controller corresponds to BACnet B-BC device profile according to DIN EN ISO 16484-5.
The controller provides the three following functionalities:
1. Native server: For each channel, appropriate BACnet objects are 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 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
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|  |  |  |
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| Accessories | Item No. | Pack. Unit |
|---|---|---|
| PC softwareWAGO 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 (UDP), HTTP, BootP, DHCP, DNS, SNTP, FTP, SNMP V1, SMTP |
| **System data Serial:** |  |
| Transmission medium | Shielded Cu cable 2 (4) x 0.25 mm² |
| 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 |

750-830
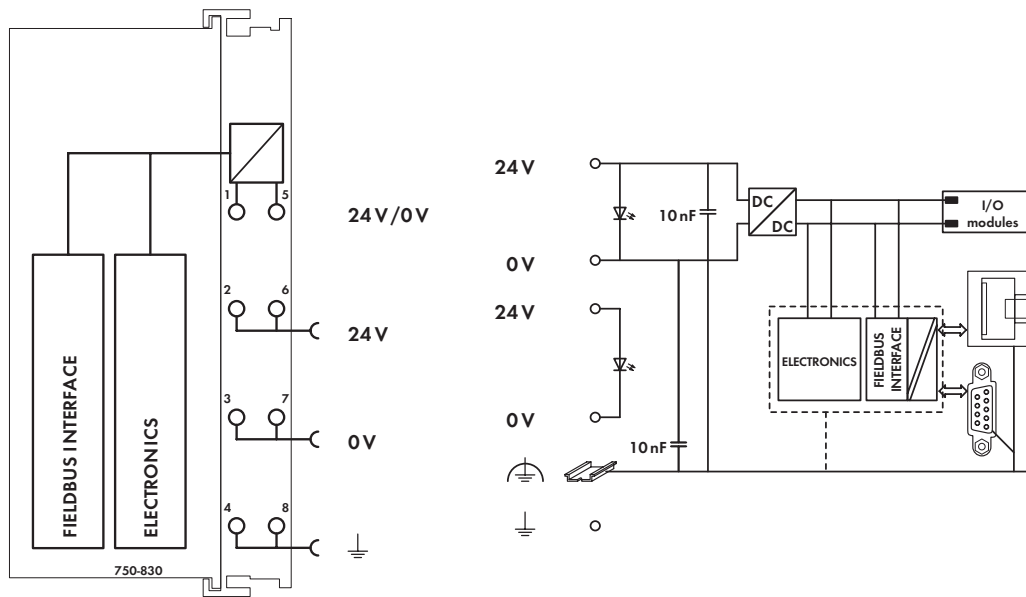
## Technical Data

| | |
|---|---|
| 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: C€ - immunity to interference | acc. to EN 61000-6-2 (2005) |
| EMC: C€ - 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) |