DISCONTINUED:
30.06.2019

The 750-830 BACnet/IP Controller connects the WAGO I/O System to the BACnet protocol and supports the B-BC BACnet device profile per 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/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.
- 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 a MODBUS RTU slave via RS-232 interface.
The 750-830 Controller's application programming is IEC 61131-3 compliant.
It is capable of multitasking, has a battery-backed, real-time clock and is based on a 32-bit CPU.

HTML pages can be generated on an internal server for Web-based applications.
Start-up and configuration of the BACnet networks is performed using the WAGO BACnet Configurator's Windows software.

Notes

Note	The WAGO BACnet Configurator can be downloaded for free at www.wago.com.

Technical data

Communications	BACnet/IP Modbus (TCP, UDP) ETHERNET RS-232 serial interface
ETHERNET protocols	HTTP BootP DHCP DNS SNTP FTP SNMP SMTP
Visualization	Web-Visu
Programming languages per IEC 61131-3	Instruction List (IL) Ladder Diagram (LD) Function Block Diagram (FBD) Continuous Function Chart (CFC) Structured Text (ST) Sequential Function Chart (SFC)
Programming environment	WAGO-I/O-*PRO* V2.3 (based on CODESYS V2.3)
Configuration options	WAGO-I/O-*CHECK* BACnet Configurator Web-Based Management
Network length (max.)	limited by IEEE 802.3 specification
Transmission rate	BACnet/IP: 10/100 Mbit/s; Serial interface: 9.6/115.2 kBd
Bus segment length (max.)	BACnet/IP: 100 m; Serial interface: 15 m
Transmission medium (communication/fieldbus)	BACnet/IP: S-UTP; 100 Ω; Cat. 5; Serial interface: Shielded Cu cable 2 (4) x 0.25 mm²
Internal memory (flash)	4.5 MB
Program memory	512 KB
Data memory	256 KB
Non-volatile software memory	24 KB
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Number of modules per node (max.)	250
Number of modules without a bus extension (max.)	64
Input and output process image (fieldbus) max.	1953.125 bytes/1953.125 bytes

Continued on next page

Technical data

Device-specific	BACnet device profile: B-BC (BACnet building controller); BACnet revision: 1.7; BACnet implementation per EN ISO 16484-5 =ANSI/ASHRAE 135-2004
Indicators	LED (LINK/ACT) green: Network connection; LED (BT, MS, NS) red/green: Status of BACnet, node, network; LED (I/O, USR) red/green/orange: Local data bus status, status programmable by user; LED (A, B) green: System power supply status, field supply
Supply voltage (system)	24 VDC (-25 … +30 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	87 %
Current consumption (5 V system supply)	300 mA
Total current (system supply)	1700 mA
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts
Current carrying capacity (power jumper contacts)	10 A
Number of outgoing power jumper contacts	3
Isolation	500 V system/field
WSPCert certification	ISO 16484-5:2010

Connection data

Connection technology: communication/fieldbus	BACnet/IP: 1 x RJ-45; Modbus (TCP, UDP): 1 x RJ-45; RS-232 serial interface: 1 x D-sub 9 socket
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	6 x CAGE CLAMP®
Connection type 1	System/field supply
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches
Connection technology: device configuration	1 x Male connector; 4-pole

Physical data

Width	50.5 mm / 1.988 inches
Height	71.1 mm / 2.799 inches
Depth	100 mm / 3.937 inches

Mechanical data

Weight	192.4 g
Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 … +55 °C
Ambient temperature (storage)	-25 … +85 °C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 … 2000 m; with temperature derating: 2000 … 5000 m (0.5 K/100 m); 5000 m (max.)
Relative humidity (without condensation)	95 %
Mounting position	Horizontal left, horizontal right, horizontal up, horizontal down, vertical top and vertical bottom
Mounting type	DIN-35 rail
Vibration resistance	per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2, marine applications
EMC emission of interference	per EN 61000-6-3, marine applications
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43

Continued on next page

Environmental requirements

Fire load	3.935 MJ
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data

Product Group	15 (I/O System)
eCl@ss 10.0	27-24-26-07
eCl@ss 9.0	27-24-26-07
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454636401
Customs tariff number	85371091990
End of Sale	2019-06-30
End of Production	2019-07-05
End of Delivery	2019-07-15
End of Service and Repair	2021-06-29

Environmental Product Compliance

CAS-No.	12060-00-3 1303-86-2 1317-36-8 25550-51-0 7439-92-1 79-94-7 80-43-3
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 4-Methyl-1,2-cyclohexanedicarboxylic anhydride Diboron trioxide Lead Lead monoxide Lead titanium oxide (PbTiO3) Peroxide, bis(1-methyl-1-phenylethyl)
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	dd8331d2-a516-42f3-b10b-adac42811586
SCIP notification number (Belgium)	35f6e720-fbb2-43fa-b766-e7880497cb65
SCIP notification number (Bulgaria)	694d7bd5-6d04-47e9-8b56-1cf10d634acb
SCIP notification number (Czech Republic)	d85c0b64-8196-4fb0-961f-d6fd810f9907
SCIP notification number (Denmark)	2a29206b-8183-4211-b7f0-40d092ceb40f
SCIP notification number (Finland)	e11d0668-bcef-4ba0-b2c9-eb11897b6f23
SCIP notification number (France)	76b69654-80b0-4f17-bb6f-dc2f33f7f00e
SCIP notification number (Germany)	4a09ba52-4d43-474d-9af6-2d35189c2e22
SCIP notification number (Hungary)	9e1718e6-382e-44df-b70e-a8dada131d2c
SCIP notification number (Italy)	a1aefffe-549c-4994-b659-14d27bc5a5a7
SCIP notification number (Netherlands)	a58ade70-5c7c-4b49-b696-7b744eb26b5c
SCIP notification number (Poland)	6c7ac4ee-ce30-4c94-aad3-edfb56347796
SCIP notification number (Romania)	7e67b2b8-de28-4d7b-83c6-6b5a93c9d025
SCIP notification number (Sweden)	f7fb0133-70f0-4dc1-9e49-a9ef3473181f

Continued on next page

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199

Approvals for marine applications

Approval	Standard	Certificate Name
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-830		

Documentation

Manual

Product Manual BACnet/IP Programmable Fieldbus Controller	V 1.1.2	pdf 13755.56 KB
Product Manual WAGOupload	V 10.0.0 30.10.2023	pdf 10739.17 KB
Product Manual WAGO BACnet Configurator	V 2.3.0 11.12.2023	pdf 9505.22 KB

Additional Information

BACnet objects, features, services	V 1.0.2	pdf 1757.60 KB

Compatibility Information

BACnet Protocol Implementation Conformance Statement (PICS)	V 1.1.2	pdf 601.40 KB

Application Notes

Application Note CoDeSys 2.3

Using the web visualization with Java™ runtime environment (JRE, JVM) 7 update 51 (7u51) (a500690)	1.2.4 26.02.2019	zip 4896.43 KB
Application Note PowerMeasurement_03 Library	19.01.2011 19.03.2012	zip 932.08 KB
Application Note DaylightSaving	02.04.07 08.11.2011	zip 666.41 KB
Application Note: DMX_02	26.04.2017 26.04.2017	zip 733.43 KB
HVAC System Macros	10.03.2017 15.03.2019	zip 13252.92 KB
Application Note: MpBus_03 Library	2020-08-14 14.08.2020	zip 513.66 KB

Application Note CoDeSys 2.3

Connection of a Thermokon Thanos SR L MODBUS room control unit to the WAGO-I/O-SYSTEM	02.05.2013 13.05.2013	zip 305.89 KB
Anbindung der HKW-Elektronik Wetterprognose-Station WS-K xx T ModBus	1.1 07.07.2017	zip 762.78 KB
Application Note Scheduler_03.lib	20.05.2011 20.05.2011	zip 1717.92 KB
Application Note Connecting with an iPod Touch	30.03.2011 28.10.2011	zip 428.79 KB
GRUNDFOS GENIbus interface, application note	20.03.2017 20.03.2017	zip 279.86 KB

Continued on next page

Application Note CoDeSys 2.3			
Connection of Thermokon Multi-function room control units WRF 08	10.04.2019 10.04.2019	zip 855.84 KB	
Connection of DMX devices to the WAGO-I/O-SYSTEM via the ArtNet-DMX STAGE-PROFI 1.1	11.01.2013 11.01.2013	zip 1450.63 KB	
Connection of Thermokon Multi-function room control units WRF 06	10.04.2019 08.04.2016	zip 826.10 KB	
Application Note for the 750-494 3-Phase Power Measurement Module	24.01.2014 11.11.2014	zip 1629.99 KB	
Application Note: EnOcean_06 Library	30.11.2016 30.11.2016	zip 822.25 KB	
Application Note BACnet_02.lib	22.09.2017 28.06.2017	zip 1753.16 KB	
Application Note for the 750-495 3-Phase Power Measurement Module	24.01.2014 24.01.2014	zip 1806.18 KB	
Application Note Weather Station Elsner P03 Modbus	01.12.2011 28.10.2011	zip 269.09 KB	
Application note: DALI 753-647 Configuration Interface	1.0.2 29.04.2019	zip 3032.71 KB	
HLK-Anlagenmakros für TRIC	2015-07-10 10.07.2015	zip 74963.43 KB	

CAD/CAE-Data

CAD data
2D/3D Models 750-830

CAE data
EPLAN Data Portal 750-830
WSCAD Universe 750-830
ZUKEN Portal 750-830

Runtime Software

Firmware			
0750-0830, Controller BACnet/IP	V 06 19.10.2021	zip 1973.81 KB	

Continued on next page

Libraries

Library			
Libraries for Building Automation CODESYS 2.3	2023-09-14 14.09.2023	zip 71441.83 KB	

1 Compatible Products

1.1 Optional Accessories

1.1.1 Communication

1.1.1.1 Communication cable



Item No.: 750-923
Configuration cable; USB connector; Length: 2.5 m



Item No.: 750-923/000-001
Configuration cable; USB connector; Length: 5 m

1.1.2 DIN-rail

1.1.2.1 Mounting accessories



Item No.: 210-196
Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-198
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



Item No.: 210-508
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-197
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



Item No.: 210-506
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-114
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-115
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored



Item No.: 210-112
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored



Item No.: 210-504
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored



Item No.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-505
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored

1.1.3 Marking

1.1.3.1 Group marker carrier



Item No.: 750-106
Group marker carrier

1.1.3.2 Marker



Item No.: 750-100
Marker card; as a DIN A4 sheet; plain



Item No.: 2009-145/000-006
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 2009-145/000-007
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray



Item No.: 2009-145/000-023
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 2009-145/000-012
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 2009-145/000-005
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red



Item No.: 2009-145/000-024
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



Item No.: 2009-145
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 2009-145/000-002
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



Item No.: 248-501/000-006
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue



Item No.: 248-501/000-007
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green



Item No.: 248-501/000-017
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



Item No.: 248-501/000-012
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange



Item No.: 248-501/000-005
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red



Item No.: 248-501/000-024
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet



Item No.: 248-501
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 248-501/000-002
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

1.1.3.3 Marker carrier



Item No.: 750-103
Group marker carrier

1.1.4 Shield termination

1.1.4.1 Shield clamping saddles



Item No.: 790-108
Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 … 8 mm



Item No.: 790-208
Shield clamping saddle; 12.4 mm wide; 3 … 8 mm



Item No.: 790-116
Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 … 16 mm



Item No.: 790-216
Shield clamping saddle; 21.8 mm wide; 6 … 16 mm



Item No.: 790-124
Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 … 24 mm



Item No.: 790-220
Shield clamping saddle; 30 mm wide; 6 … 20 mm



Item No.: 790-140
Shield clamping saddle; diameter of compatible conductor

1.1.5 Software

1.1.5.1 Basic version



Item No.: 759-333
WAGO-I/O-PRO



Item No.: 759-333/000-923
WAGO-I/O-PRO; USB-Set

1.1.6 System enclosure

1.1.6.1 System enclosure



Item No.: 850-825
IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20



Item No.: 850-826
IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-827
IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



Item No.: 850-828
IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



Item No.: 850-826/002-000
IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-827/002-000
IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



Item No.: 850-828/002-000
IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



Item No.: 850-834
IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20



Item No.: 850-835
IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-836
IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



Item No.: 850-814/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate



Item No.: 850-815/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate



Item No.: 850-816/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate



Item No.: 850-817/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate