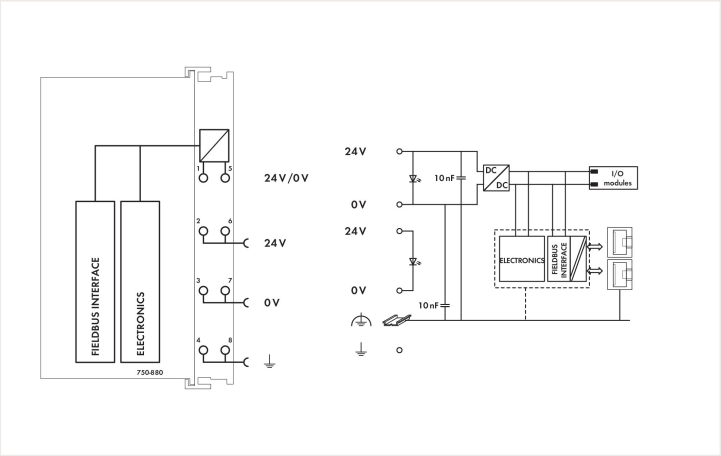
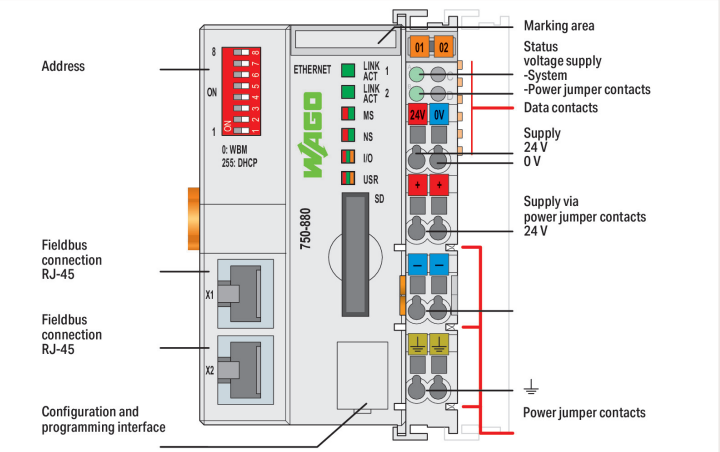
Data sheet | Item number: 750-880

Controller ETHERNET; 3rd Generation; SD Card Slot





Note:
For this item, a successor is available: Modbus TCP 750-890EtherNet/IP™ 750-893

The ETHERNET Controller can be used as a programmable controller within ETHERNET networks in conjunction with the WAGO I/O System.

The controller supports all digital, analog and specialty modules found within the 750/753 Series, and is suitable for data rates of 10/100 Mbit/s.
Two ETHERNET interfaces and an integrated switch allow the fieldbus to be wired in a line topology, eliminating the need for additional network devices, such as switches or hubs. Both interfaces support autonegotiation and Auto-MDI(X).
The DIP switch configures the last byte of the IP address and may be used for IP address assignment.
The controller supports both MODBUS/TCP and EtherNet/IP for use in industrial environments. It also supports a wide variety of standard ETHERNET protocols for easy integration into IT environments (e.g., HTTP, BootP, DHCP, DNS, SNTP, SNMP, FTP).
For use in telecontrol applications; the 750-880/025-001 and -002 Controllers support the IEC 60870-5-101/-103-104, IEC 61850-7, and IEC 61400-25 communication protocols.
An integrated Webserver provides user configuration options, while displaying the controller's status information.
The IEC 61131-3 programmable controller is multitasking-capable and features a capacitor-backed RTC.
A data memory of 1 MB is available.
The 750-880 Controller is equipped with a removable memory card slot. A memory card can be used to transfer device parameters or files (e.g., boot files) from one controller to another. The card can be accessed via FTP and used as an additional drive.

Technical data

Communication	EtherNet/IP™ Modbus (TCP, UDP) ETHERNET
ETHERNET protocols	HTTP BootP DHCP DNS SNTP FTP SNMP
Visualization	Web-Visu
CPU	32 bits
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* Web-Based Management
Baud rate (communication/fieldbus 1)	10/100 Mbit/s
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Program memory	1024 KB
Data memory	1024 KB
Non-volatile software memory	32 KB
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO 758-879/000-001 Memory Card)
Memory card slot	Push-push mechanism; cover lid (sealable)
Number of modules per node (max.)	250
Number of modules without a bus extension (max.)	64
Input and output process image (fieldbus) max.	1020 Worte/1020 Worte
Indicators	LED (LINK/ACT) green: Network connection via ports 1 … 2; LED (MS, NS) red/green: Status of 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)	90 %
Current consumption (5 V system supply)	450 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

Connection data

Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45; Modbus TCP/UDP: 2 x RJ-45
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

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Physical data

Width	61.5 mm / 2.421 inches
Height	71.9 mm / 2.831 inches
Height from upper-edge of DIN-rail	64.7 mm / 2.547 inches
Depth	100 mm / 3.937 inches

Mechanical data

Weight	161.9 g
Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 … +55 °C
Surrounding air temperature (storage)	-40 … +85 °C
Protection type	IP20
Pollution degree (5)	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 %
Relative humidity (with condensation)	Short-term condensation per Class 3K6/IEC EN 60721-3-3 and E-DIN 40046-721-3, accounting for a temperature range of −20 to +60 °C (except for wind-driven precipitation, water and ice formation)
Mounting position	any
Mounting type	DIN-35 rail
Vibration resistance	4g 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
Fire load	3.582 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 (Remote I/O)
eCl@ss 10.0	27-24-26-07
eCl@ss 9.0	27-24-26-07
PU (SPU)	1 Stück
Packaging type	Box
GTIN	4050821134053
End of Sale	2019-12-15
End of Production	2019-12-20
End of Delivery	2019-12-30
End of Service and Repair	2021-12-14

Continued on next page

Approvals and certificates

Ex-Approvals

Approval	Standard	Certificate name
ATEX TUEV Nord Cert GmbH	EN 60079-0	
CCCEx CQST/CNEx	CNCA-C23-01	2020312310000215 (Ex nA IIC T4 Gc)
EAC Brjansker Zertifizierungs-stelle	TP TC 012/2011	EAC RU C-DE.AM02. B.00163/19 (2Ex nA IIC T4 Gc X)
IECEx TUEV Nord Cert GmbH	IEC 60079-0	IECEx_TUN_14.0035_X (Ex ec IIC T4 Gc)
INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079-0	BR-Ex_TÜV 12.1297 X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA-TIONS)	UL 121201	E198726 Sec.1

Country specific Approvals

Approval	Standard	Certificate name
EAC Brjansker Zertifizierungs-stelle	TP TC 020/2011	EAC RU C-DE.AM02. B.00087/19

Ship Approvals

Approval	Standard	Certificate name
BV Bureau Veritas S.A.	-	30389/B1 BV
DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA0000194
KR Korean Register of Ship-ping	-	KR HMB05880-AC001
PRS Polski Rejestr Statków	-	TE/2236/880590/19

UL-Approvals

Approval	Standard	Certificate name
UL Underwriters Laboratories Inc. (ORDINARY LOCATI-ONS)	UL 508	E175199 Sec.1

Downloads

Documentation

Manual

	V 2.4.0	pdf 14729.38 KB	
System Manual WAGO I/O System 750 / 753	V 3.1.0 11.05.2022	pdf 8495.90 KB	
WAGOupload	V 9.1.0 07.02.2022	pdf 4070.37 KB	
WAGO MODBUS Mas-ter Configurator	V 1.1.0	pdf 1761.59 KB	

Quick-Start Guide

Programmable Fieldbus Controller ETHERNET 750-88x	V 1.0.0	pdf 4292.44 KB	
Quickstart Starterkit 750-880	V 1.0.0	pdf 4023.52 KB	

Continued on next page

System Description		
Use in Hazardous Environments	V 1.0.0	pdf 1007.06 KB

Additional Information		
Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 259.56 KB

Bid Text		
750-880	26.06.2019	docx 17.48 KB
750-880	19.02.2019	xml 7.51 KB

Application Notes

Application Note CoDeSys 2.3		
HART Tool Routing via ETHERNET with 750-820x/750-88x and CODESYS 2.3 (a116120)	1.0.0 22.03.2019	pdf 3798.36 KB
Wago 750-880 EtherNetIP Communications with a CompactLogix PLC (a500620)	V1.0.0 20.09.2013	zip 559.55 KB
Using WagoLibStatusEx.lib on 750-880 (a114110)	V1.0.0 31.05.2011	zip 53.25 KB
Using the web visualization with Java™ runtime environment (JRE, JVM) 7 update 51 (7u51) (a500690)	V1.2.4 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
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	V 1.1 07.07.2017	zip 762.78 KB
Application Note Scheduler_03.lib	20.05.2011 20.05.2011	zip 1717.92 KB
GRUNDFOS GENIbus interface, application note	20.03.2017 20.03.2017	zip 279.86 KB
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

Application Note CoDeSys 2.3		
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 for the 750-495 3-Phase Power Measurement Module	24.01.2014 24.01.2014	zip 1806.18 KB
Application Note Library WagoDatalogger_02	2020-05-20 20.05.2020	zip 1256.74 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	V1.0.2 29.04.2019	zip 3032.71 KB
HLK-Anlagenmakros für TRIC	2015-07-10 10.07.2015	zip 74963.43 KB
Application Note Library ModuleAccess_01	05.01.2016 29.01.2016	zip 1001.22 KB

Continued on next page

CAD/CAE-Data

CAD data
2D/3D Models 750-880

CAE data
EPLAN Data Portal 750-880
WSCAD Universe 750-880
ZUKEN Portal 750-880

Runtime Software

Firmware		
0750-0880, Controller ETHERNET	V 16 27.07.2021	zip 5017.06 KB

Libraries

Library		
WagoLibFTPS_01	V 1.15 14.01.2019	zip 406.70 KB
WagoLibConfigETH_01	1.0.0	pdf 381.48 KB
WAGO_Datalogger_02.lib	2.7 20.05.2020	zip 662.90 KB