

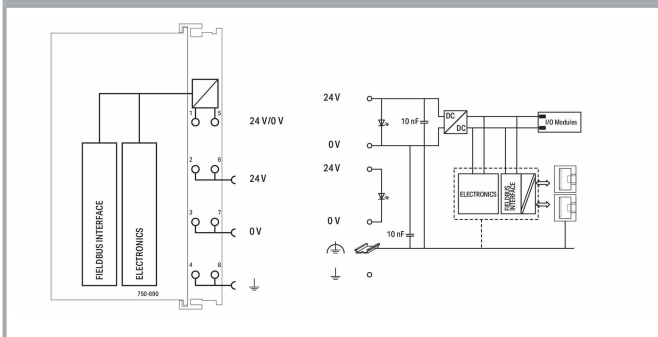
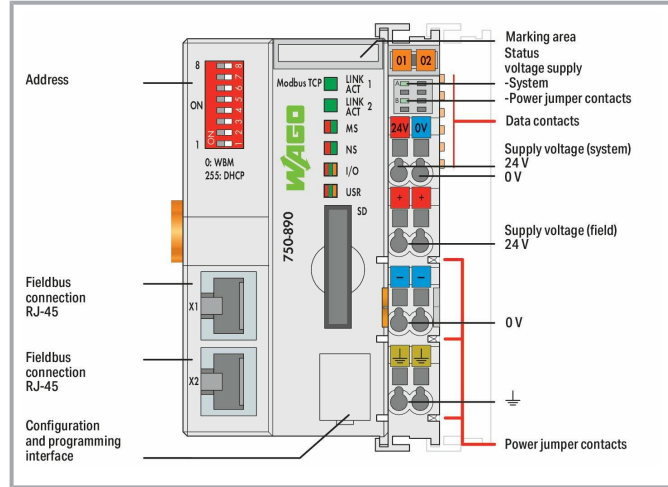
Data sheet | Item number: 750-890

Controller Modbus TCP; 4th generation; 2 x ETHERNET, SD Card Slot

www.wago.com/750-890



Color:



Subject to changes. Please also observe the further product documentation!

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Do you have any questions about our products?
We are always happy to take your call at 01788 568 008.



Item description

The Modbus TCP 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.

This controller supports Modbus TCP for use in industrial environments. It also supports a wide variety of standard ETHERNET protocols for easy integration into IT environments (e.g., HTTP(S), BootP, DHCP, DNS, SNTP, SNMP, (S)FTP).

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 8 MB is available.

The 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 memory card can be accessed via FTP and be used as an additional drive.

Data

Technical data

Communication	Modbus (TCP, UDP)
ETHERNET protocols	HTTP(S) BootP DHCP DNS SNTP FTP(S) 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 CODESYS Library
Baud rate (communication/fieldbus 1)	10/100 Mbit/s

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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	8 MB
Data memory	8 MB
Non-volatile software memory	32 Kbytes
Memory card type	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO 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 (fieldbus) process image (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 %
Power consumption (5 V system supply)	440 mA
Total current (system supply)	1,700 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	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 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Connection technology: device configuration	1 x Male connector; 4-pole

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Physical data

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

Mechanical data

Weight	151.6 g
Color	light gray
Housing material	Polycarbonate; Polyamide 6.6
Conformity marking	CE

Environmental requirements

Surrounding air temperature (operation)	0 ... 55 °C
Surrounding air temperature (storage)	-25 ... 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 %
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	2.24 MJ
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data

PU (SPU)	1 Stück
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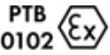




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Packaging type	box
Country of origin	DE
GTIN	4055143821407
Customs tariff number	85371091990

Approvals / Certificates


Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079	TUEV_14_ATEX_148929_X
 Ex nA IIC T4 Gc	CCCEX CQST/CNEX	CNCA-C23-01	2020312310000213
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00163/19
	IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0035_X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1


Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	KC National Radio Research Agency	Article 58-2, Clause 3	MSIP- REM-W43- PFC750


Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1821926

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	BV Bureau Veritas S.A.	Rules for class. of Steel Ships	66711/A0
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	LR Lloyds Register	-	02/20026 (E6)
	PRS Polski Rejestr Statków	-	TE/2236 /880590/19
	RINA RINA Germany GmbH	-	ELE066419XG

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199 Sec11

Required accessories

Memory card















Memory card			
	Item no.: 758-879/000-001 Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C		www.wago.com/758-879/000-001
	Item no.: 758-879/000-2108 Memory Card SD; pSLC-NAND; 8 GB; Temperature range: -40 to 90°C		www.wago.com/758-879/000-2108

Optional accessories








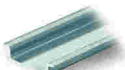

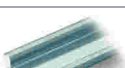


Shield termination

Shield clamping saddle			
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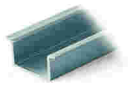
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	Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	www.wago.com/790-116
	Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	www.wago.com/790-124
	Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm	www.wago.com/790-108
	Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor	www.wago.com/790-140
	Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	www.wago.com/790-216
	Item no.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm	www.wago.com/790-208
Cables and pluggable connectors		
Connector plug		
	Item no.: 750-975 ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly	www.wago.com/750-975
	Item no.: 750-978/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief	www.wago.com/750-978/000-012
	Item no.: 750-979/000-012 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief	www.wago.com/750-979/000-012
	Item no.: 750-978/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief	www.wago.com/750-978/000-021
	Item no.: 750-979/000-022 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief	www.wago.com/750-979/000-022
	Item no.: 750-978/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief	www.wago.com/750-978/000-022
	Item no.: 750-979/000-011 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief	www.wago.com/750-979/000-011
	Item no.: 750-979/000-021 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief	www.wago.com/750-979/000-021

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	Item no.: 750-977/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22	www.wago.com/750-977/000-011
	Item no.: 750-978/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief	www.wago.com/750-978/000-011
	Item no.: 750-977/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24	www.wago.com/750-977/000-022
	Item no.: 750-977/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22	www.wago.com/750-977/000-012
	Item no.: 750-977/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24	www.wago.com/750-977/000-021
Carrier rail		
Mounting accessories		
	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	www.wago.com/210-197
	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	www.wago.com/210-198
	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	www.wago.com/210-504
	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	www.wago.com/210-505
	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	www.wago.com/210-506
	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	www.wago.com/210-508
	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	www.wago.com/210-113
	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	www.wago.com/210-118
	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	www.wago.com/210-112

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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

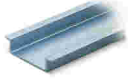
www.wago.com/210-114



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

www.wago.com/210-115



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

www.wago.com/210-196

Marking accessories

Marker carrier

Item no.: 750-103

Group marker carrier

www.wago.com/750-103

Marker



Item no.: 248-501/000-006

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/248-501/000-006



Item no.: 248-501/000-007

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

www.wago.com/248-501/000-007



Item no.: 248-501/000-002

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

www.wago.com/248-501/000-002



Item no.: 248-501/000-012

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

www.wago.com/248-501/000-012



Item no.: 248-501

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

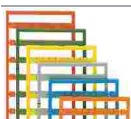
www.wago.com/248-501



Item no.: 248-501/000-017

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green

www.wago.com/248-501/000-017



Item no.: 248-501/000-005

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

www.wago.com/248-501/000-005



Item no.: 248-501/000-024

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

www.wago.com/248-501/000-024

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Item no.: 248-501/000-023

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/248-501/000-023



Item no.: 750-100

Marker card; as a DIN A4 sheet; plain

www.wago.com/750-100

Group marker carrier



Item no.: 750-106

Group marker carrier

www.wago.com/750-106

Software

Basic version



Item no.: 759-333

WAGO-I/O-PRO

www.wago.com/759-333



Item no.: 759-333/000-923

WAGO-I/O-PRO; USB-Set

www.wago.com/759-333/000-923



Item no.: 759-911

WAGO-I/O-PRO; CD

www.wago.com/759-911

Downloads

Documentation

Manual

Controller Modbus TCP; G4; 2ETH; SD Generation 4; 2 x ETHERNET; SD Card Slot	V 1.3.0 16 Sep 2021	pdf 7.9 MB	Download
System Manual WAGO I/O System 750 / 753 Decentralized Automation Technology	V 3.0.2 27 Apr 2021	pdf 6.6 MB	Download
System Manual Series 750/753 Online HTML		URL	Download

Bid Text

750-890 docx - Datei	26 Jun 2019	docx 20.1 kB	Download
750-890	19 Feb 2019	xml	Download

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X81 - Datei

9.8 kB

System Description

Use in Hazardous Environments Term definition, marking and installation regulations	V 1.0.0	pdf 1.0 MB	Download
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Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
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750 Controller, General Product Information		pdf 621.9 kB	Download
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Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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Runtime Software

Firmware

Controller 4. Generation	V 08 10 Aug 2021	zip 4.5 kB	Download
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CAD/CAE-Data

CAE data

ZUKEN Portal 750-890		URL	Download
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EPLAN Data Portal 750-890		URL	Download
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CAD data

2D/3D Models 750-890		URL	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-890 Controller Modbus TCP; 4th generation; 2 x ETHERNET, SD Card Slot		URL	Download
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Installation Notes

Product family

Controller 750

[Show all products from the family](#)

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