

Data sheet | Item number: 750-890

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



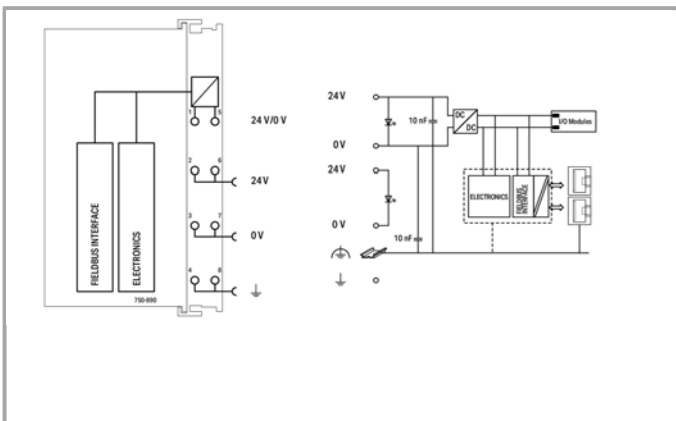
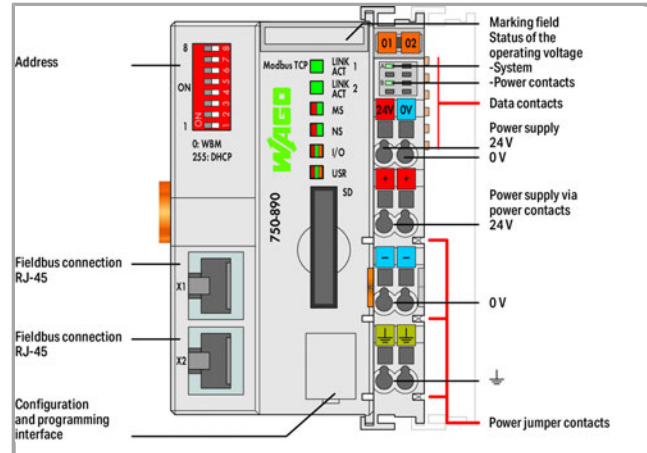
750-890

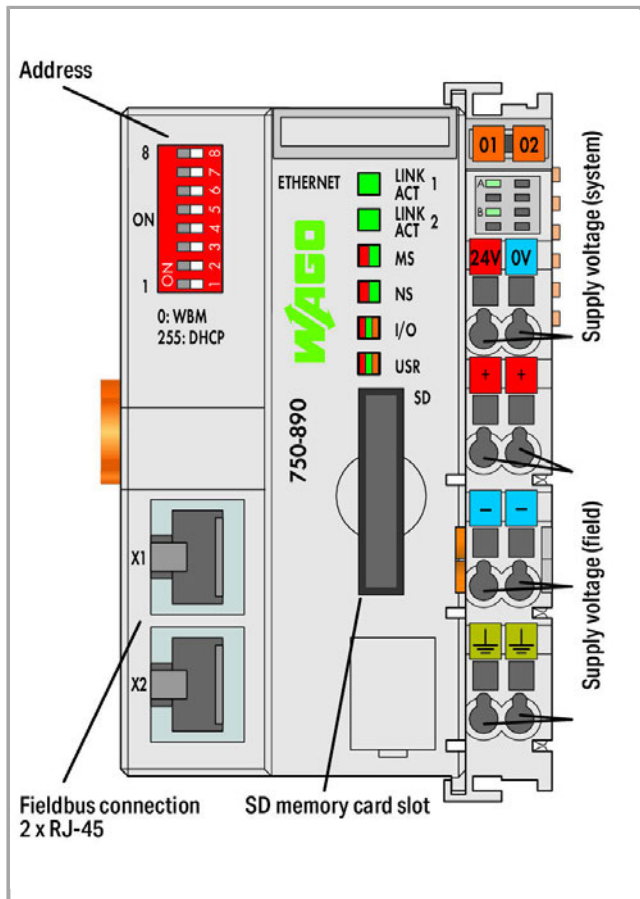


RoHS Compliant

[BOMcheck.net](https://www.bomcheck.net)

Color:





Item description

WAGO's Modbus TCP Controller can be used as a programmable controller within ETHERNET networks in conjunction with the WAGO-I/O-SYSTEM.

It 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. This eliminates 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 (HTTP(S), BootP, DHCP, DNS, SNTP, SNMP, (S)FTP).

An integrated Webserver provides user configuration options, while displaying PLC 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 protocol	HTTP(S) BootP DHCP DNS SNTP (S)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 CODESYS Library
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; Line length (max.): 100 m
Transmission performance	Class D acc. to EN 50173
Program memory	8.192 MB
Data memory	8.192 MB
Software non-volatile memory	32 Kbytes
Type of memory card	SD and SDHC up to 32 GB (All guaranteed properties are only valid in connection with the WAGO 758-879/000-001 memory card.)
Memory card slot	Push-push mechanism, sealable cover lid
Number of modules per node max.	250
Number of I/O modules without bus extension max.	64
Input and output process image (Fieldbus) max.	1020 Worte/1020 Worte
Indicators	LED (LINK/ACT) green: Network connection Port 1 2; LED (MS, NS) red/green: Status of node, network; LED (I/O, USR) red/green /orange: Internal data bus status, status programmable by user; LED (A, B) green: System power supply status, field supply
System supply voltage	DC 24 V(-25 +30 %); via wiring level (CAGE CLAMP® connection)
Input current typ. at rated load (24 V)	500 mA
Efficiency of the power supply (typ.) at nominal load (24 V)	90 %
Current consumption, system supply (5 V)	440 mA
Total current for system supply	1700 mA



Field supply voltage	DC 24 V (-25 +30 %); via power jumper contacts
Current carrying capacity of the power jumper contacts	10 A
Number of outgoing power jumper contacts	3
Isolation	500 V system/supply

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 4-pole male connector

Geometrical Data

Width	61.5 mm / 2.421 inch
Height	71.9 mm / 2.831 inch
Height from upper-edge of DIN-35 rail	64.7 mm / 2.547 inch
Depth	100 mm / 3.937 inch

Mechanical data

Weight	151.6 g
Color	light gray
Housing material	Polycarbonate, polyamide 6.6
Conformity marking	CE

Environmental Requirements

Surrounding air (operating) temperature	0 55 °C
Surrounding air (storage) temperature	-40 85 °C
Protection class	IP20
Degree of pollution (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); max.: 5000 m
Relative air humidity (no condensation)	95 %
Mounting position	any
Type of mounting	DIN-35 rail
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	acc. to EN 61000-6-2, marine applications

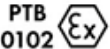


EMC emission of interference	acc. to EN 61000-6-3, marine applications
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data


Country of origin	DE
GTIN	4055143821407
Customs Tariff No.	85371091990

Approvals / Certificates


Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079	TUEV_14_ATEX_148929_X
	ATEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0035_X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	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
	DNV GL	-	TAA0000194



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RINA Germany GmbH

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UL-Approvals



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



















Compatible products


General accessories


	Item no.: 750-921 Bluetooth® Adapter; light gray		750-921
	Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m; black		750-923
	Item no.: 750-923/000-001 Configuration cable; USB connector; Length: 5 m		750-923 /000-001


Carrier rail


	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		210-112
	Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715		210-113


	Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715	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	210-115
	Item no.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-118
	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	210-196
	Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	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	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	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	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	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	210-508
memory card		
	Item no.: 758-879/000-001 Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	758-879 /000-001
shield connection		
	Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor	790-108
	Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	790-116
	Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	790-124
	Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor	790-140
	Item no.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm	790-208
	Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	790-216
Marking accessories		
	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card	248-501


	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow	248-501 /000-002
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	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-005
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	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-006
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	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-007
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	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-012
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	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-017
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	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-023
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	Item no.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-024
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	Item no.: 750-100 Marker card; as a DIN A4 sheet; plain; white	750-100
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	Item no.: 750-103 Group marker carrier	750-103
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	Item no.: 750-106 Group marker carrier	750-106
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wiring and connectors













	Item no.: 750-975 ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly; light gray	750-975
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	Item no.: 750-977/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22	750-977 /000-011
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	Item no.: 750-977/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22	750-977 /000-012
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	Item no.: 750-977/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24	750-977 /000-021
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	<p>Item no.: 750-977/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24</p>	750-977	750-977
	<p>Item no.: 750-978/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief</p>	750-978	750-978
	<p>Item no.: 750-978/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief</p>	750-978	750-978
	<p>Item no.: 750-978/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief</p>	750-978	750-978
	<p>Item no.: 750-978/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief</p>	750-978	750-978
	<p>Item no.: 750-979/000-011 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief</p>	750-979	750-979
	<p>Item no.: 750-979/000-012 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief</p>	750-979	750-979
	<p>Item no.: 750-979/000-021 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief</p>	750-979	750-979
	<p>Item no.: 750-979/000-022 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief</p>	750-979	750-979
software			
	<p>Item no.: 759-333 WAGO-I/O-PRO</p>	759-333	759-333
	<p>Item no.: 759-333/000-923 WAGO-I/O-PRO; USB-Set</p>	759-333	759-333
	<p>Item no.: 759-911 WAGO-I/O-PRO; CD</p>	759-911	759-911

Downloads

Documentation

Manual

<p>Controller Modbus TCP; G4; 2ETH; SD Generation 4; 2 x ETHERNET; SD Card Slot</p>	V 1.0.1	pdf 7.6 MB	Download
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Bid Text



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System Description

Overview on WAGO-I/O-SYSTEM 750 approvals

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750 Controller, General Product Information

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Use in Hazardous Environments V 1.0.0

Term definition, marking and installation regulations

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Design Notes V 2.0.0

Basic conditions and recommendations for higher operational safety

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Additional Information

Disposal; Electrical and electronic equipment, Packaging V 1.0.0

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Runtime Software

Firmware

Firmware: 750-890 Controller Modbus TCP; 4th generation; 2 x ETHERNET, SD Card Slot; light gray 03 Feb 25, 2019

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Product family

Controller 750
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Subject to changes.