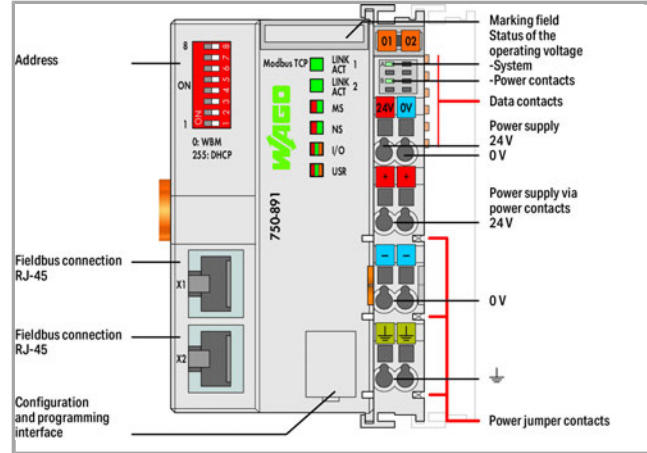


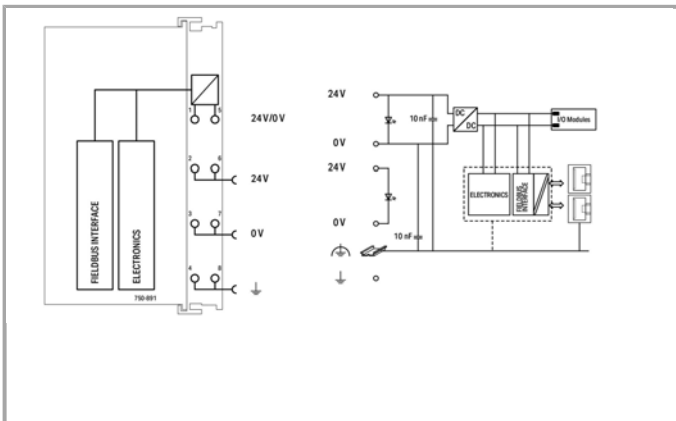
Data sheet | Item number: 750-891
 Controller Modbus TCP; 4th generation; 2 x ETHERNET

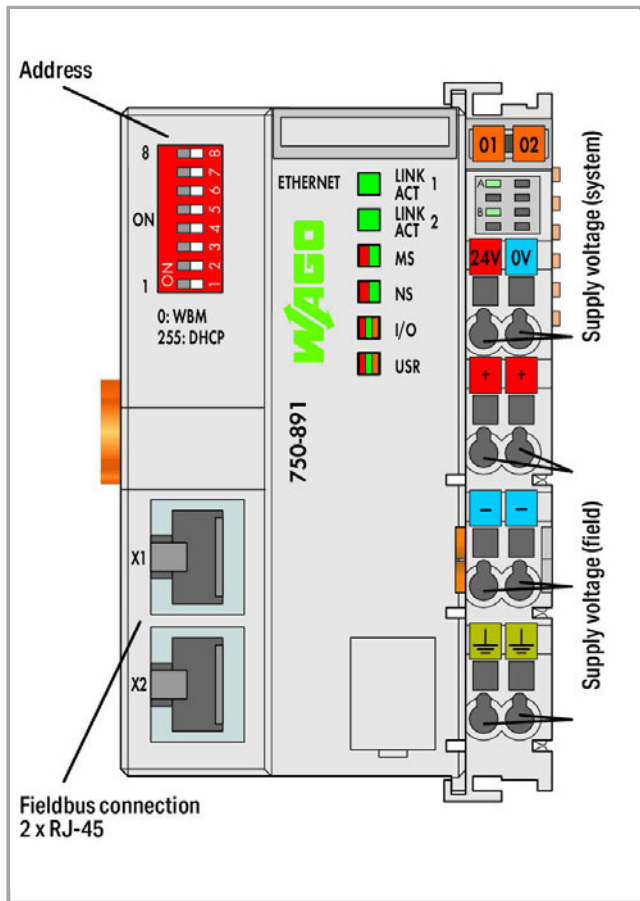


750-891



RoHS Compliant ✓ BOMcheck.net





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.

The controller detects all connected I/O modules and creates a local process image. This process image may include a mixed arrangement of analog (word-by-word data transfer) and digital (bit-by-bit data transfer) modules.

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.

The controller is designed for fieldbus communication in Modbus® networks. It also supports a wide variety of standard ETHERNET protocols (HTTP, HTTPS, BootP, DHCP, DNS, SNTP, SNMP, SFTP).

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.

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	4.096 MB
Data memory	4.096 MB
Software non-volatile memory	32 Kbytes
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)	390 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; 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	149.9 g
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
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GTIN	4055143821513
Customs Tariff No.	85371091990

Approvals / Certificates





Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0035_X
	ATEX TUEV Nord Cert GmbH	EN 60079	TUEV_14_ATEX_148929_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 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








Compatible products

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

software








	Item no.: 759-333 WAGO-I/O-PRO	759-333
	Item no.: 759-333/000-923 WAGO-I/O-PRO; USB-Set	759-333 /000-923
	Item no.: 759-911 WAGO-I/O-PRO; CD	759-911

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
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-005
	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-006
	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-007
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	248-501 /000-012

	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	/000-017	248-501
	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	/000-023	248-501
	Item no.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	/000-024	248-501
	Item no.: 750-100 Marker card; as a DIN A4 sheet; plain; white		750-100
	Item no.: 750-103 Group marker carrier		750-103
	Item no.: 750-106 Group marker carrier		750-106
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	/000-001	750-923
wiring and connectors			
	Item no.: 750-975 ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly; light gray		750-975
	Item no.: 750-977/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22	/000-011	750-977
	Item no.: 750-977/000-012 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22	/000-012	750-977
	Item no.: 750-977/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24	/000-021	750-977
	Item no.: 750-977/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24	/000-022	750-977
	Item no.: 750-978/000-011 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief	/000-011	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
		/000-012
	<p>Item no.: 750-978/000-021 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief</p>	750-978
		/000-021
	<p>Item no.: 750-978/000-022 Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief</p>	750-978
		/000-022
	<p>Item no.: 750-979/000-011 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief</p>	750-979
		/000-011
	<p>Item no.: 750-979/000-012 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief</p>	750-979
		/000-012
	<p>Item no.: 750-979/000-021 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief</p>	750-979
		/000-021
	<p>Item no.: 750-979/000-022 Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief</p>	750-979
		/000-022

Downloads

Documentation

Manual

Controller Modbus TCP; G4; 2ETH Generation 4; 2 x ETHERNET	V 1.0.1	pdf 7.4 MB	Download
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Bid Text

		docx 18.9 kB	Download
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System Description

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
750 Controller, General Product Information		pdf 621.9 kB	Download
Use in Hazardous Environments Term definition, marking and installation regulations	V 1.0.0	pdf 1.0 MB	Download
Design Notes Basic conditions and recommendations for higher operational safety	V 2.0.0	pdf 1.5 MB	Download



Additional Information

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

Firmware

Firmware: 750-891 Controller Modbus TCP; 4th generation; 2 x ETHERNET	02 Feb 25, 2019	zip 3.5 MB	Download
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Product family

Controller 750
[Show all products from the family](#)

Subject to changes.
