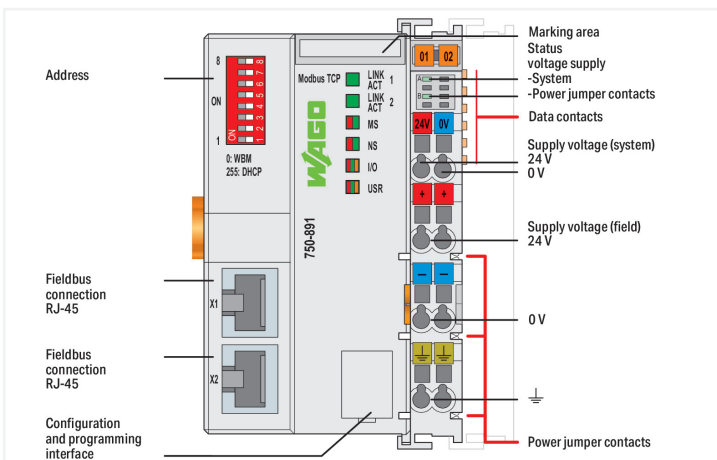
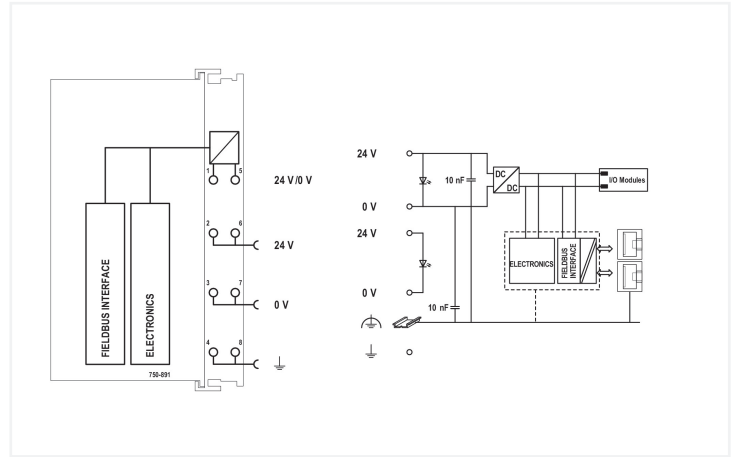


Data Sheet | Item Number: 750-891
Controller Modbus TCP; 4th generation; 2 x ETHERNET

<https://www.wago.com/750-891>



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

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.

| 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) |

Technical data

| | |
|---|--|
| 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; 100 m maximum cable length |
| Transmission performance | Class D per EN 50173 |
| Program memory | 4 MB |
| Data memory | 4 MB |
| Non-volatile software memory | 32 KB |
| Number of modules per node (max.) | 250 |
| Number of modules without a bus extension (max.) | 64 |
| Input and output process image (fieldbus) max. | 1020 words/1020 words |
| 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) | 390 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 | 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 inches |
| Connection technology: device configuration | 1 x Male connector; 4-pole |

Physical data

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

Mechanical data

| | |
|--------------------|------------------------------|
| Weight | 149.9 g |
| 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 | 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 | 2.429 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

| | |
|-----------------------|---------------|
| eCl@ss 10.0 | 27-24-26-07 |
| eCl@ss 9.0 | 27-24-26-07 |
| ETIM 8.0 | EC000236 |
| ETIM 7.0 | EC000236 |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4055143821513 |
| Customs tariff number | 85371091990 |

Environmental Product Compliance

| | |
|---|--|
| CAS-No. | 1303-86-2 1314-23-4 1317-36-8 693-98-1 7439-92-1 79-94-7 |
| REACH Candidate List Substance | 2-methylimidazole Diboron trioxide Lead Lead monoxide Tetrabromobisphenol A (TBBPA) Zirconium Oxide |
| RoHS Exemption | 7(a) 7(c)-I 7(c)-II |
| SCIP notification number (Austria) | c5b3e813-eb0b-445b-af50-f19b04fe5f4b |
| SCIP notification number (Belgium) | c97e0334-35ae-406e-8fd0-a27da4fa2e06 |
| SCIP notification number (Bulgaria) | 436d76be-0d80-4b9c-9516-9dfb46c83823 |
| SCIP notification number (Czech Republic) | e8bba3ac-3c64-4688-9cc5-c2bf313a7753 |
| SCIP notification number (Denmark) | 3e87f316-4cf1-4039-84cc-2538a51b0f38 |
| SCIP notification number (Finland) | ab4133a3-4233-4a76-95f8-2f4cff85e2c5 |
| SCIP notification number (France) | d4dbae29-1a33-411b-a1ec-10983250c027 |
| SCIP notification number (Germany) | a842d43c-957c-48ac-9697-7383445dd428 |
| SCIP notification number (Hungary) | 497c149c-4f29-4842-a540-b6434648dcc2 |
| SCIP notification number (Italy) | 33d2d232-c3c5-41d3-b42b-12796622d10b |
| SCIP notification number (Netherlands) | 86fbf79c-60fd-4b7f-bf1c-b30f5d7edebb |
| SCIP notification number (Poland) | 14093575-ee9e-479f-a19b-30231d2d9472 |
| SCIP notification number (Romania) | bdd60dbb-0206-4cd2-8188-b0575853abc8 |

Environmental Product Compliance

SCIP notification number (Sweden)

c22d1014-6c24-4342-876a-6d2f9c5eac2e

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---|------------------------|---------------------------------|
| EAC Brjansker Zertifizierungsstelle | TP TC 020/2011 | EAC RU C-DE.AM02. B.00087/19 |
| KC National Radio Research Agency | Article 58-2, Clause 3 | MSIP-REM-W43-PFC750 |
| UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS) | UL 61010-2-201 | E175199 Sec11 |

Approvals for marine applications



| Approval | Standard | Certificate Name |
|---|---------------------------------|-------------------|
| ABS American Bureau of Shipping | - | 22-2219060 |
| BSH Bundesamt fuer Seeschifffahrt und Hydrographie | - | 1104 |
| BV Bureau Veritas S.A. | Rules for class. of Steel Ships | 66711/A0 |
| DNV DNV GL SE | DNV-CG-0339, Aug.2021 | TAA0000194 |
| KR Korean Register of Shipping | - | KR HMB05880-AC001 |
| LR Lloyds Register EMEA | - | LR22180952TA |
| PRS Polski Rejestr Statków | - | TE/2236/880590/19 |
| RINA RINA Germany GmbH | - | ELE343521XG001 |

Approvals for hazardous areas



| Approval | Standard | Certificate Name |
|--|----------------|---|
| ATEX TUEV Nord Cert GmbH | EN 60079-0 | |
| CCC CNEX | CNCA-C23-01 | 2020312310000213 (Ex ec IIC T4 Gc) |
| EAC Brjansker Zertifizierungsstelle | TP TC 012/2011 | EAC RU C-DE.AM02. B.00163/19 (2Ex e IIC T4 Gc X) |
| IECEx TUEV Nord Cert GmbH | IEC 60079-0 | IECEx TUN 14.0035 X (Ex ec IIC T4 Gc) |
| INMETRO TUV Rheinland do Brasil Ltda. | IEC 60079-0 | BR-Ex_TUV 12.1297 X |
| UKEx WAGO GmbH & Co. KG | EN 60079-0 | UKCA_WA GO22UKEX003X_ec |
| UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | E198726 Sec.1 |

Downloads

Environmental Product Compliance




Compliance Search

Environmental Product
Compliance 750-891




Documentation




Manual

| | | | |
|--|-----------------------|-------------------|---|
| Product Manual Controller Modbus TCP; G4; 2ETH | V 1.1.1 25.05.2022 | pdf 7532.08 KB |  |
| System Manual WAGO I/O System 750/753 | V 3.1.0 05.12.2022 | pdf 8495.90 KB |  |
| System Manual Series 750/753 | | |  |


System Description

| | | | |
|---|--|------------------|---|
| Overview on WAGO-I/O-SYSTEM 750 approvals | | pdf 770.48 KB |  |
| 750 Controller, General Product Information | | pdf 507.50 KB |  |

Bid Text

| | | | |
|----------------------------|------------|-----------------|---|
| 750-891 | 19.11.2018 | doc 32.50 KB |  |
| 750-891 | 19.02.2019 | xml 7.98 KB |  |
| ausschreiben.de 750-891 | | |  |

Instruction Leaflet



| | | | |
|---------------------------------|------------|------------------|---|
| CCC Ex (Additional information) | 26.04.2023 | pdf 159.76 KB |  |
|---------------------------------|------------|------------------|---|

CAD/CAE-Data

CAD data




| | |
|----------------------|---|
| 2D/3D Models 750-891 |  |
|----------------------|---|

CAE data

| | |
|---------------------------|---|
| EPLAN Data Portal 750-891 |  |
| ZUKEN Portal 750-891 |  |

Engineering-Software

Configuration and Commissioning Software

| | | | |
|---|---------------------------|---------------------|---|
| WAGO-IO-PRO Demo-Version (759-912) / Serie 750, 758 und 762 | V 2.3.9.68 17.02.2022 | zip 122524.17 KB |  |
| (759-316) WAGO Ethernet Settings / Serie 750 | 06.18.01.01 02.09.2021 | zip 26678.54 KB |  |
| WAGOupload | 1.16.1.0 02.02.2022 | zip 12111.45 KB |  |

Runtime Software

| Firmware | | | |
|-----------------------|--------------------|-------------------|--|
| 0750-089x, Controller | V 10 10.02.2022 | zip 4643.77 KB | |

1 Compatible Products

1.1 Optional Accessories

1.1.1 Cables and connectors

1.1.1.1 Connector plug



Item No.: 750-979/000-011
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief



Item No.: 750-979/000-021
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief



Item No.: 750-979/000-012
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief



Item No.: 750-979/000-022
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief



Item No.: 750-977/000-011
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22



Item No.: 750-978/000-011
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief



Item No.: 750-977/000-021
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24



Item No.: 750-978/000-021
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief



Item No.: 750-977/000-012
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22



Item No.: 750-978/000-012
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief



Item No.: 750-977/000-022
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24



Item No.: 750-978/000-022
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief



Item No.: 750-975
ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly

1.1.2 Communication

1.1.2.1 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

1.1.3 DIN-rail

1.1.3.1 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

1.1.3.1 Mounting accessories



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

1.1.4 Marking

1.1.4.1 Group marker carrier



Item No.: 750-106
Group marker carrier

1.1.4.2 Marker



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



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

1.1.4.3 Marker carrier



Item No.: 750-103
Group marker carrier

1.1.5 Shield termination

1.1.5.1 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

1.1.6 Software

1.1.6.1 Basic version



[Item No.: 759-333](#)
WAGO-I/O-PRO

[Item No.: 759-333/000-923](#)
WAGO-I/O-PRO; USB-Set