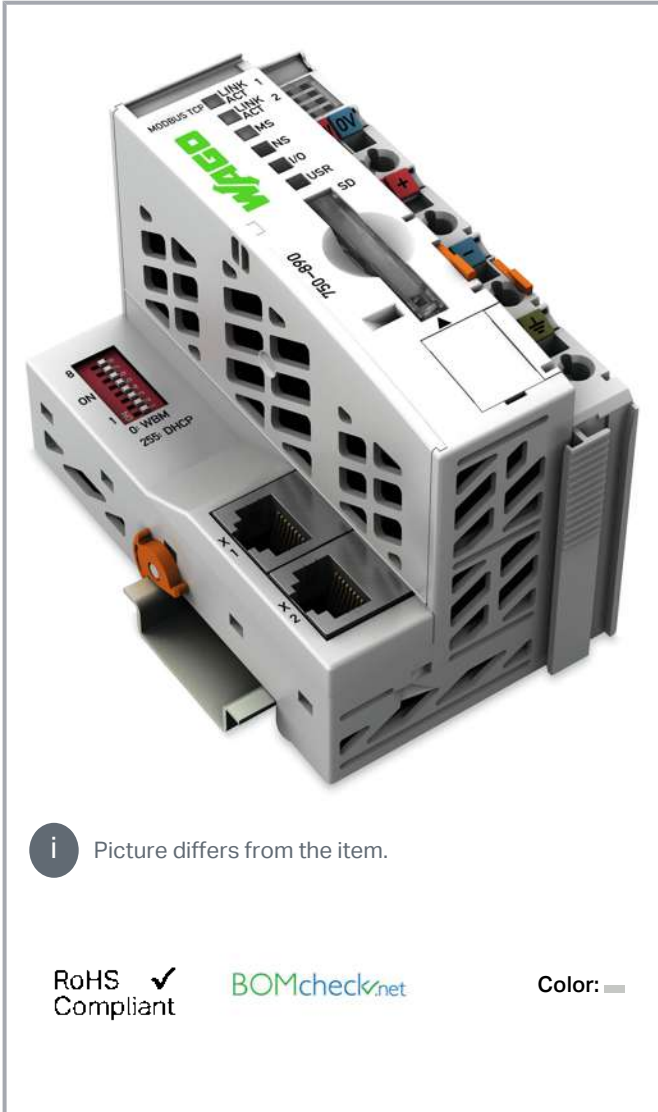


Data sheet | Item number: 750-890/025-001

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



[www.wago.com/750-890\\_025-001](http://www.wago.com/750-890_025-001)

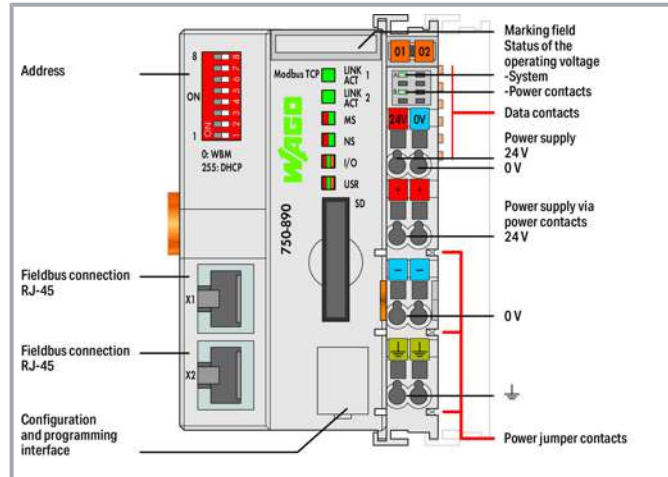


 Picture differs from the item.

RoHS   
Compliant



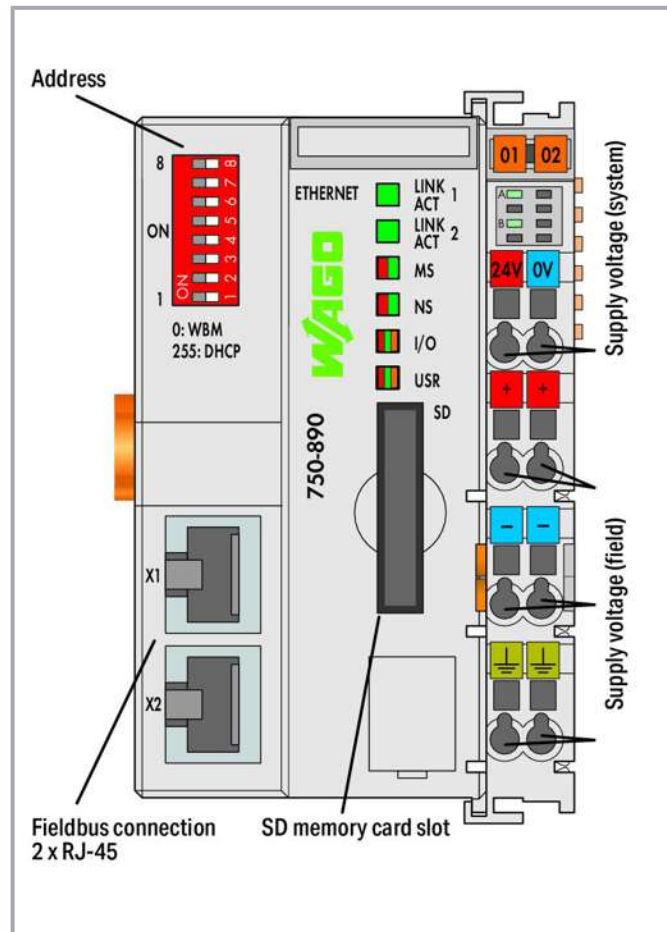
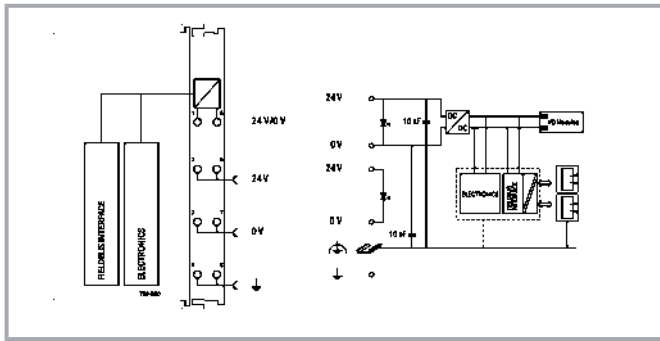
Color: 



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

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## 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.

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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) Telecontrol protocols
ETHERNET protocols	HTTP(S) BootP DHCP DNS SNTP (S)FTP SNMP
Telecontrol protocols	IEC 60870-5-101/-103/-104 IEC 61400-25 IEC 61850-7 DNP3
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; 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 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

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(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; Telecontrol protocol IEC 60870-5-101/-103: 1 x Serial interface via I/O module; Telecontrol protocol IEC 60870-5-104: 1 x RJ-45; Telecontrol protocol IEC 61850: 1 x RJ-45; Telecontrol protocol DNP3: 1 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 <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Connection technology: device configuration	1 x Male connector; 4-pole

### 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	160.6 g
Color	light gray
Housing material	Polycarbonate; Polyamide 6.6

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Conformity marking	CE
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## Environmental requirements

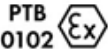
Surrounding air temperature (operation)	-20 ... 60 °C
Surrounding air temperature (storage)	-40 ... 85 °C
Protection type	IP20
Pollution degree (5)	2 per IEC 61131-2
Operating altitude	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); 5000 m (max.)
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
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	1.706 MJ
Permissible pollutant concentration H <sub>2</sub> S at a relative humidity < 75%	10 ppm
Permissible pollutant concentration SO <sub>2</sub> at a relative humidity < 75%	25 ppm

## Commercial data

Packaging type	BOX
Country of origin	DE
GTIN	4055143918695
Customs tariff number	8537109160

## Approvals / Certificates

### Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079	TUEV_14_ATEX_148929_X
	CCCEX CQST/CNEx	CNCA-C23-01	2020312310000213

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Ex nA IIC T4 Gc



**IECEX**  
TUEV Nord Cert GmbH

IEC 60079

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
	<b>KC</b> National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-PFC750

**Ship Approvals**


Logo	Approval	Additional Approval Text	Certificate name
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAA00001J4

**UL-Approvals**

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

**Required accessories**

memory card

	Item no.: 758-879/000-001 Memory Card SD; SLC-NAND; 2 GByte; Temperature from -40 to 90 °C	<a href="http://www.wago.com/758-879/000-001">www.wago.com/758-879/000-001</a>
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Subject to changes. Please also observe the further product documentation!

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**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](http://www.wago.com/758-879/000-2108)

## Compatible products
















### Carrier rail

	<b>Item no.: 210-112</b> 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	<a href="http://www.wago.com/210-112">www.wago.com/210-112</a>
	<b>Item no.: 210-113</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-113">www.wago.com/210-113</a>
	<b>Item no.: 210-114</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-114">www.wago.com/210-114</a>
	<b>Item no.: 210-115</b> 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	<a href="http://www.wago.com/210-115">www.wago.com/210-115</a>
	<b>Item no.: 210-118</b> Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-118">www.wago.com/210-118</a>
	<b>Item no.: 210-196</b> Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-196">www.wago.com/210-196</a>
	<b>Item no.: 210-197</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-197">www.wago.com/210-197</a>
	<b>Item no.: 210-198</b> Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored	<a href="http://www.wago.com/210-198">www.wago.com/210-198</a>
	<b>Item no.: 210-504</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-504">www.wago.com/210-504</a>
	<b>Item no.: 210-505</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored	<a href="http://www.wago.com/210-505">www.wago.com/210-505</a>
	<b>Item no.: 210-506</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-506">www.wago.com/210-506</a>
	<b>Item no.: 210-508</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored	<a href="http://www.wago.com/210-508">www.wago.com/210-508</a>

### General accessories

	<b>Item no.: 750-921</b> Bluetooth® Adapter	<a href="http://www.wago.com/750-921">www.wago.com/750-921</a>
	<b>Item no.: 750-923</b> Configuration cable; USB connector; Length: 2.5 m	<a href="http://www.wago.com/750-923">www.wago.com/750-923</a>














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	<b>Item no.: 750-923/000-001</b> Configuration cable; USB connector; Length: 5 m	<a href="http://www.wago.com/750-923/000-001">www.wago.com/750-923/000-001</a>
<b>shield connection</b>		
	<b>Item no.: 790-108</b> Shield clamping saddle; 11 mm wide; 0-8 mm diameter conductors	<a href="http://www.wago.com/790-108">www.wago.com/790-108</a>
	<b>Item no.: 790-116</b> Shield clamping saddle; 19 mm wide; 7-16 mm diameter conductors	<a href="http://www.wago.com/790-116">www.wago.com/790-116</a>
	<b>Item no.: 790-124</b> Shield clamping saddle; 27 mm wide; 6-24 mm diameter conductors	<a href="http://www.wago.com/790-124">www.wago.com/790-124</a>
	<b>Item no.: 790-140</b> Shield clamping saddle; 43 mm wide; 22-40 mm diameter conductors	<a href="http://www.wago.com/790-140">www.wago.com/790-140</a>
	<b>Item no.: 790-208</b> Shield clamping saddle; 12.4 mm wide; 3-8 mm diameter conductors	<a href="http://www.wago.com/790-208">www.wago.com/790-208</a>
	<b>Item no.: 790-216</b> Shield clamping saddle; 21.8 mm wide; 6-16 mm diameter conductors	<a href="http://www.wago.com/790-216">www.wago.com/790-216</a>
<b>software</b>		
	<b>Item no.: 759-333</b> WAGO-I/O-PRO	<a href="http://www.wago.com/759-333">www.wago.com/759-333</a>
	<b>Item no.: 759-333/000-923</b> WAGO-I/O-PRO; USB-Set	<a href="http://www.wago.com/759-333/000-923">www.wago.com/759-333/000-923</a>
	<b>Item no.: 759-911</b> WAGO-I/O-PRO; CD	<a href="http://www.wago.com/759-911">www.wago.com/759-911</a>
<b>wiring and connectors</b>		
	<b>Item no.: 750-975</b> RJ-45 connector; IP20; ETHERNET 10/100 Mbit/s	<a href="http://www.wago.com/750-975">www.wago.com/750-975</a>
	<b>Item no.: 750-977/000-011</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22	<a href="http://www.wago.com/750-977/000-011">www.wago.com/750-977/000-011</a>
	<b>Item no.: 750-977/000-012</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22	<a href="http://www.wago.com/750-977/000-012">www.wago.com/750-977/000-012</a>
	<b>Item no.: 750-977/000-021</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24	<a href="http://www.wago.com/750-977/000-021">www.wago.com/750-977/000-021</a>
	<b>Item no.: 750-977/000-022</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24	<a href="http://www.wago.com/750-977/000-022">www.wago.com/750-977/000-022</a>

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	<b>Item no.: 750-978/000-011</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief	<a href="http://www.wago.com/750-978/000-011">www.wago.com/750-978/000-011</a>
	<b>Item no.: 750-978/000-012</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief	<a href="http://www.wago.com/750-978/000-012">www.wago.com/750-978/000-012</a>
	<b>Item no.: 750-978/000-021</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief	<a href="http://www.wago.com/750-978/000-021">www.wago.com/750-978/000-021</a>
	<b>Item no.: 750-978/000-022</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief	<a href="http://www.wago.com/750-978/000-022">www.wago.com/750-978/000-022</a>
	<b>Item no.: 750-979/000-011</b> Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief	<a href="http://www.wago.com/750-979/000-011">www.wago.com/750-979/000-011</a>
	<b>Item no.: 750-979/000-012</b> Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief	<a href="http://www.wago.com/750-979/000-012">www.wago.com/750-979/000-012</a>
	<b>Item no.: 750-979/000-021</b> Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief	<a href="http://www.wago.com/750-979/000-021">www.wago.com/750-979/000-021</a>
	<b>Item no.: 750-979/000-022</b> Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief	<a href="http://www.wago.com/750-979/000-022">www.wago.com/750-979/000-022</a>
<b>Marking accessories</b>		
	<b>Item no.: 248-501</b> Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card	<a href="http://www.wago.com/248-501">www.wago.com/248-501</a>
	<b>Item no.: 248-501/000-002</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow	<a href="http://www.wago.com/248-501/000-002">www.wago.com/248-501/000-002</a>
	<b>Item no.: 248-501/000-005</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red	<a href="http://www.wago.com/248-501/000-005">www.wago.com/248-501/000-005</a>
	<b>Item no.: 248-501/000-006</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue	<a href="http://www.wago.com/248-501/000-006">www.wago.com/248-501/000-006</a>
	<b>Item no.: 248-501/000-007</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray	<a href="http://www.wago.com/248-501/000-007">www.wago.com/248-501/000-007</a>

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	<b>Item no.: 248-501/000-012</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange	<a href="http://www.wago.com/248-501/000-012">www.wago.com/248-501/000-012</a>
	<b>Item no.: 248-501/000-017</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green	<a href="http://www.wago.com/248-501/000-017">www.wago.com/248-501/000-017</a>
	<b>Item no.: 248-501/000-023</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green	<a href="http://www.wago.com/248-501/000-023">www.wago.com/248-501/000-023</a>
	<b>Item no.: 248-501/000-024</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet	<a href="http://www.wago.com/248-501/000-024">www.wago.com/248-501/000-024</a>
	<b>Item no.: 750-100</b> Marker card; as a DIN A4 sheet; plain	<a href="http://www.wago.com/750-100">www.wago.com/750-100</a>
	<b>Item no.: 750-103</b> Group marker carrier	<a href="http://www.wago.com/750-103">www.wago.com/750-103</a>
	<b>Item no.: 750-106</b> Group marker carrier	<a href="http://www.wago.com/750-106">www.wago.com/750-106</a>

## Downloads

### Documentation

#### Manual

Controller Modbus TCP; G4; 2ETH; SD Generation 4; 2 x ETHERNET; SD Card Slot	V 1.2.2 2021 Jan 18	pdf 8.4 MB	Download
Systemhandbuch WAGO I/O System 750 / 753 Dezentrale Automatisierungstechnik	V 3.0.0 2021 Mar 4	pdf 6.6 MB	Download

#### Bid Text

750-890/025-001	xml 10.0 kB	Download
750-890/025-001	docx 17.4 kB	Download

#### System Description

750 Controller, General Product Information	pdf 621.9 kB	Download
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Overview on WAGO-I/O-SYSTEM 750 approvals

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pdf  
780.2 kB

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#### Additional Information

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

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#### CAD files

##### CAD data

2D/3D Models 750-890/025-001 URL

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##### CAE data

ZUKEN Portal 750-890/025-001 URL

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#### Environmental Product Compliance

##### Compliance Search

Environmental Product Compliance 750-890/025-001 URL

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

#### Installation Notes

#### Product family

##### PLC Controllers

[Show all products from the family](#)

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