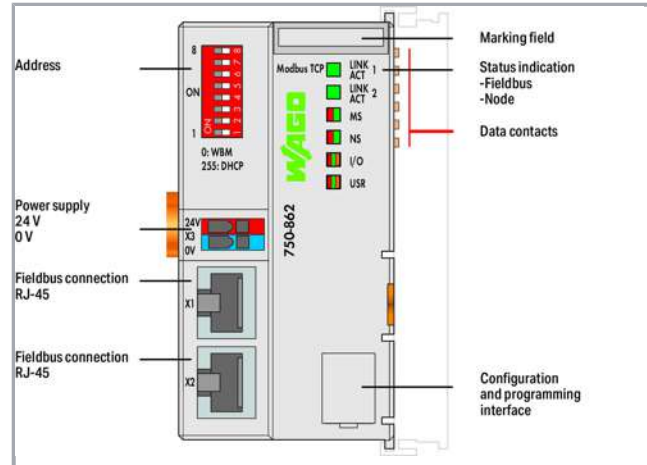


Data sheet | Item number: 750-862

Controller Modbus TCP; 4th generation; 2 x ETHERNET; ECO; light gray

[www.wago.com/750-862](http://www.wago.com/750-862)



RoHS  Compliant

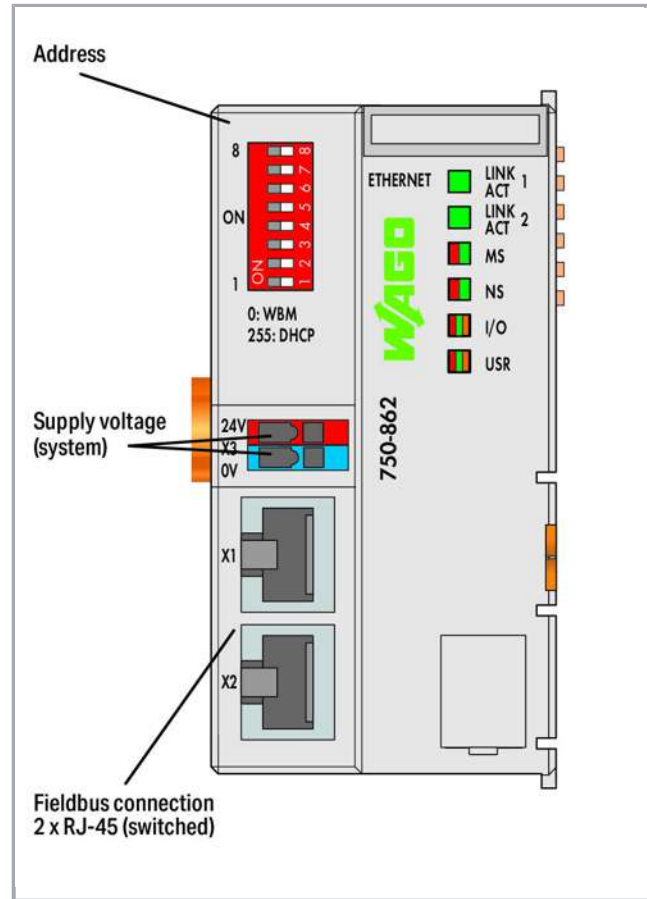
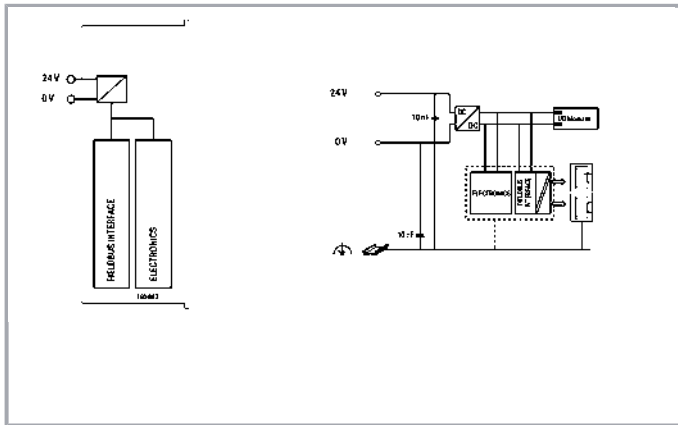
BOMcheck.net

Color:

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

WAGO Kontakttechnik GmbH & Co. KG  
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32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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## 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 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.

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



## Data

### Technical Data

Communication	Modbus (TCP, UDP)
Ethernet protocol	HTTP(S) BootP DHCP DNS SNTP (S)FTP SNMP
Visualization	Webserver
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	2 MB
Data memory	2 MB
Software non-volatile memory	16 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 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
System supply voltage	DC 24 V(-25 ... +30 %); via pluggable connector
Input current typ. at rated load (24 V)	300 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	700 mA

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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 type (1)	System 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

### Geometrical Data

Width	49,5 mm / 1.949 inch
Height	71,9 mm / 2.831 inch
Height from upper-edge of DIN-35 rail	64,7 mm / 2.547 inch
Depth	96,8 mm / 3.811 inch

### Mechanical data

Weight	105.3 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); 5000 m (max.)
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	per EN 61000-6-2, marine applications

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

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

**Commercial data**

Packaging type	BOX
Country of origin	DE
GTIN	4055143821308
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
	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


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	<b>ABS</b> American Bureau of Shipping	-	19- HG1821926
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	<b>LR</b> Lloyds Register	-	02/20026 (E6)
	<b>PRS</b> Polski Rejestr Statków	-	TE/2236 /880590/19
	<b>RINA</b> RINA Germany GmbH	-	ELE066419XG


**UL-Approvals**

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

**Counterpart**

**Compatible products**

**Marking accessories**

	<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>
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**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](http://www.wago.com/248-501/000-002)



**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](http://www.wago.com/248-501/000-005)



**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](http://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](http://www.wago.com/248-501/000-007)



**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](http://www.wago.com/248-501/000-012)



**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](http://www.wago.com/248-501/000-017)



**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](http://www.wago.com/248-501/000-023)



**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](http://www.wago.com/248-501/000-024)

#### 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

[www.wago.com/210-112](http://www.wago.com/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

[www.wago.com/210-113](http://www.wago.com/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

[www.wago.com/210-114](http://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

[www.wago.com/210-115](http://www.wago.com/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

[www.wago.com/210-118](http://www.wago.com/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















[www.wago.com/210-196](http://www.wago.com/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

[www.wago.com/210-197](http://www.wago.com/210-197)

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

	<p><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</p>	<a href="http://www.wago.com/210-198">www.wago.com/210-198</a>
	<p><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</p>	<a href="http://www.wago.com/210-504">www.wago.com/210-504</a>
	<p><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</p>	<a href="http://www.wago.com/210-505">www.wago.com/210-505</a>
	<p><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</p>	<a href="http://www.wago.com/210-506">www.wago.com/210-506</a>
	<p><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</p>	<a href="http://www.wago.com/210-508">www.wago.com/210-508</a>
<b>wiring and connectors</b>		
	<p><b>Item no.: 750-975</b> ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly; light gray</p>	<a href="http://www.wago.com/750-975">www.wago.com/750-975</a>
	<p><b>Item no.: 750-977/000-011</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22</p>	<a href="http://www.wago.com/750-977/000-011">www.wago.com/750-977/000-011</a>
	<p><b>Item no.: 750-977/000-012</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22</p>	<a href="http://www.wago.com/750-977/000-012">www.wago.com/750-977/000-012</a>
	<p><b>Item no.: 750-977/000-021</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24</p>	<a href="http://www.wago.com/750-977/000-021">www.wago.com/750-977/000-021</a>
	<p><b>Item no.: 750-977/000-022</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24</p>	<a href="http://www.wago.com/750-977/000-022">www.wago.com/750-977/000-022</a>
	<p><b>Item no.: 750-978/000-011</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief</p>	<a href="http://www.wago.com/750-978/000-011">www.wago.com/750-978/000-011</a>
	<p><b>Item no.: 750-978/000-012</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief</p>	<a href="http://www.wago.com/750-978/000-012">www.wago.com/750-978/000-012</a>
	<p><b>Item no.: 750-978/000-021</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief</p>	<a href="http://www.wago.com/750-978/000-021">www.wago.com/750-978/000-021</a>
	<p><b>Item no.: 750-978/000-022</b> Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief</p>	<a href="http://www.wago.com/750-978/000-022">www.wago.com/750-978/000-022</a>

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





**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](http://www.wago.com/750-979/000-011)



**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](http://www.wago.com/750-979/000-012)



**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](http://www.wago.com/750-979/000-021)



**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](http://www.wago.com/750-979/000-022)

#### General accessories



**Item no.: 750-921**  
Bluetooth® Adapter; light gray

[www.wago.com/750-921](http://www.wago.com/750-921)



**Item no.: 750-923**  
Configuration cable; USB connector; Length: 2.5 m; black

[www.wago.com/750-923](http://www.wago.com/750-923)



**Item no.: 750-923/000-001**  
Configuration cable; USB connector; Length: 5 m

[www.wago.com/750-923/000-001](http://www.wago.com/750-923/000-001)

#### shield connection



**Item no.: 790-108**  
Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm

[www.wago.com/790-108](http://www.wago.com/790-108)



**Item no.: 790-116**  
Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm

[www.wago.com/790-116](http://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](http://www.wago.com/790-124)



**Item no.: 790-140**  
Shield clamping saddle; diameter of compatible conductor

[www.wago.com/790-140](http://www.wago.com/790-140)



**Item no.: 790-208**  
Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

[www.wago.com/790-208](http://www.wago.com/790-208)



**Item no.: 790-216**  
Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm

[www.wago.com/790-216](http://www.wago.com/790-216)



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

[www.wago.com/790-220](http://www.wago.com/790-220)

#### system box



**Item no.: 850-804**  
IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip

[www.wago.com/850-804](http://www.wago.com/850-804)

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



**Item no.: 850-804/000-001**  
IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip

[www.wago.com/850-804/000-001](http://www.wago.com/850-804/000-001)



**Item no.: 850-805**  
IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip

[www.wago.com/850-805](http://www.wago.com/850-805)

software



**Item no.: 759-333**  
WAGO-I/O-PRO

[www.wago.com/759-333](http://www.wago.com/759-333)



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

[www.wago.com/759-333/000-923](http://www.wago.com/759-333/000-923)



**Item no.: 759-911**  
WAGO-I/O-PRO; CD

[www.wago.com/759-911](http://www.wago.com/759-911)

Downloads

Documentation

Manual

Controller Modbus TCP; G4; 2ETH; ECO 4. Generation; 2 x ETHERNET; ECO	V 1.0.2 Dec 9, 2019	pdf 7.2 MB	Download
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Bid Text

750-862 doc - Datei	Nov 19, 2018	doc 33.8 kB	Download
750-862 GAEB X81 - Datei	Feb 19, 2019	xml 8.0 kB	Download

Additional Information

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

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
Design Notes Basic conditions and recommendations for higher operational safety	V 2.0.0	pdf 1.5 MB	Download
750 Controller, General Product Information		pdf	Download

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

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621.9 kB

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Use in Hazardous Environments	V 1.0.0	pdf	Download
Term definition, marking and installation regulations		1.0 MB	

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## Runtime Software

### Firmware

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Firmware: 750-862 Controller Modbus TCP; 4th generation; 2 x ETHERNET; ECO; light gray	05 Feb 11, 2020	zip	Download
		5.7 MB	

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## Installation Notes

## Product family

### Controller 750

[Show all products from the family](#)

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