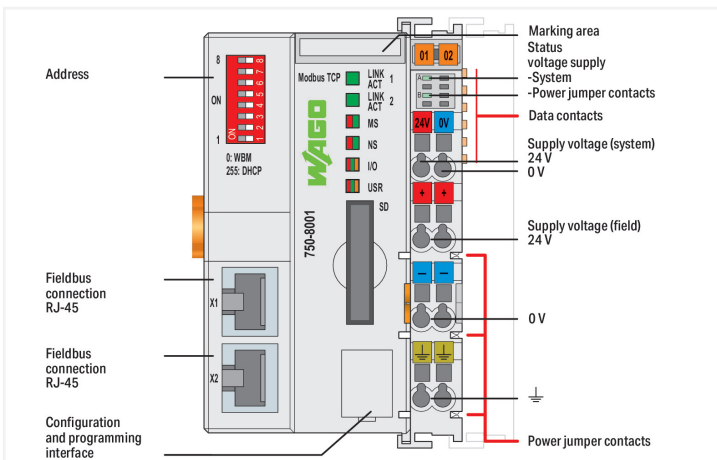
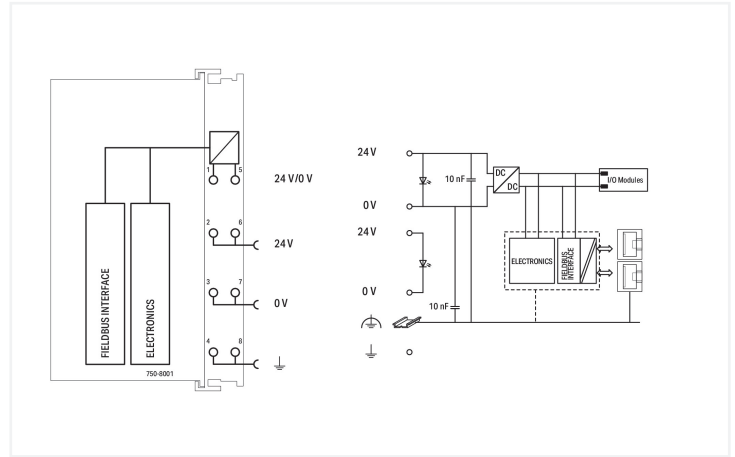


Data Sheet | Item Number: 750-8001

Basic Controller 100; 2 x ETHERNET

<https://www.wago.com/750-8001>



This controller can be used as a programmable controller within ETHERNET networks along with the WAGO I/O System.

The controller supports all digital and analog input/output modules, as well 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, eliminating 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 (e.g., HTTP(S), BootP, DHCP, DNS, SNTP, SNMP, SFTP).

An integrated Webserver provides user configuration options, while displaying PLC status information.

The controller has role-based user management and supports the RFC 5424 syslog protocol.

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 card can be accessed via FTP and used as an additional drive.

Technical data

| | |
|--------------------|--|
| Communications | Modbus (TCP, UDP) |
| ETHERNET protocols | HTTP(S) BootP DHCP DNS SNTP SFTP SNMP (V2 & V3) TLS1.3 Syslog |
| Visualization | Webserver with integrated RBAC (Role-Based Access Control) |
| CPU | 32 bits |

Technical data

| | |
|---|--|
| 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 | CODESYS V3.5 |
| Configuration options | WAGO-I/O-CHECK Web-Based Management CODESYS Library |
| Baud rate (communication/fieldbus 1) | 10/100 Mbit/s |
| Transmission 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 | 16 MB |
| Data memory | 32 MB |
| Non-volatile software memory | 128 KB |
| Type of memory card | SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO's memory 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 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) | 440 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 VAC 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 | 154.4 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 | Horizontal left, horizontal right, horizontal up, horizontal down, vertical top and vertical bottom |
| 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 | 2.484 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

| | |
|-----------------------|---------------|
| ETIM 8.0 | EC000236 |
| ETIM 7.0 | EC000236 |
| PU (SPU) | 1 pcs |
| Country of origin | DE |
| GTIN | 4066966361902 |
| Customs tariff number | 85371091990 |

Environmental Product Compliance

| | |
|---|---|
| CAS-No. | 1303-86-2 1317-36-8 7439-92-1 79-94-7 |
| REACH Candidate List Substance | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide |
| RoHS Compliance Status | Compliant,With Exemption |
| RoHS Exemption | 6(c) 7(a) 7(c)-I 7(c)-II |
| SCIP notification number (Austria) | c860baa6-a8d5-4d64-b517-c6b06bb7ec08 |
| SCIP notification number (Belgium) | 35246927-d874-4df3-a823-416c3e51faf2 |
| SCIP notification number (Bulgaria) | be381a95-8372-4917-999a-0350f1e2c3c8 |
| SCIP notification number (Czech Republic) | 43ba3f7f-2e75-428f-9aac-6d5fda8a5ac9 |
| SCIP notification number (Denmark) | f457f258-9930-4fbd-bda6-dc91e02bbcf |
| SCIP notification number (Finland) | c6ebc103-bec0-4056-bb22-0fcad1280913 |
| SCIP notification number (France) | 549b616e-e528-4813-9c5c-50ebd556ff2d |
| SCIP notification number (Germany) | 41cb42de-4ff4-4459-b10d-4ab37213a6b8 |
| SCIP notification number (Hungary) | 85765840-ce7f-42d3-942b-0ec273454a4b |
| SCIP notification number (Italy) | e31f30ac-645f-40af-8d9d-941892a1ef13 |
| SCIP notification number (Netherlands) | dd972ea5-1f96-42ac-a170-90642984f705 |

Environmental Product Compliance

| | |
|------------------------------------|--------------------------------------|
| SCIP notification number (Poland) | 8a26fee3-e09a-409d-8e12-81ac409dd62e |
| SCIP notification number (Romania) | 5278ff5c-504e-479b-bcd1-047a83af8ac0 |
| SCIP notification number (Sweden) | 4228030b-7777-4e37-b006-6ec1f601c762 |

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|--------------------------------------|------------------------|---------------------|
| EAC GZO Almaty Standart | TP TC 020/2011 | EAC CoC 03083 |
| KC National Radio Research Agency | Article 58-2, Clause 3 | MSIP-REM-W43-PFC750 |

Approvals for marine applications



| Approval | Standard | Certificate Name |
|-------------------------------|-----------------------|-------------------|
| DNV DNV GL SE | DNV-CG-0339, Aug.2021 | TAA0000194 |
| PRS Polski Rejestr Statków | - | TE/1101/880590/23 |

Approvals for hazardous areas



| Approval | Standard | Certificate Name |
|--|----------|------------------|
| UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | - | E198726 |

Downloads

Environmental Product Compliance

| Compliance Search |
|---|
| Environmental Product Compliance 750-8001 ↓ |

Documentation

| Manual | | | |
|----------------------|-----------------------|-------------------|-------------------|
| Basic Controller 100 | V 1.0.1 05.05.2023 | pdf 3666.78 KB | ↓ |

| System Description | |
|---|------------------------------------|
| Basic Controller 100, Allgemeine Produktinformationen | pdf 431.09 KB ↓ |

CAD/CAE-Data

CAD data

2D/3D Models
750-8001



Engineering-Software

Configuration and Commissioning Software

(759-316) WAGO Ether- 06.18.01.01 zip
net Settings / Serie 750 02.09.2021 26678.54 KB



1 Compatible Products

1.1 Required Accessories

1.1.1 Memory card

1.1.1.1 Memory card



Item No.: 758-879/000-2108
Memory Card SD; pSLC-NAND; 8 GB;
Temperature range: -40 to 90°C



Item No.: 758-879/000-001
Memory Card SD; SLC-NAND; 2 GByte;
Temperature from -40 to 90 °C

1.2 Optional Accessories

1.2.1 Cables and connectors

1.2.1.1 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

1.2.2 Communication

1.2.2.1 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

1.2.3 DIN-rail

1.2.3.1 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



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

1.2.4 Marking

1.2.4.1 Group marker carrier



Item No.: 750-106

Group marker carrier

1.2.4.2 Marker



Item No.: 750-100

Marker card; as a DIN A4 sheet; plain

Item No.: 2009-145/000-006

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 2009-145/000-007

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 2009-145/000-023

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 2009-145/000-012

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 2009-145/000-005

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

Item No.: 2009-145/000-024

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 2009-145

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 2009-145/000-002

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

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

1.2.4.2 Marker



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

1.2.4.3 Marker carrier



Item No.: 750-103

Group marker carrier

1.2.5 Shield termination

1.2.5.1 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

1.2.7 System enclosure

1.2.7.1 System enclosure



Item No.: 850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20

Item No.: 850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

Item No.: 850-827

IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

Item No.: 850-828

IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



Item No.: 850-826/002-000

IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

Item No.: 850-827/002-000

IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

Item No.: 850-828/002-000

IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip

Item No.: 850-834

IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20



Item No.: 850-835

IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

Item No.: 850-836

IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

Item No.: 850-814/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate

Item No.: 850-815/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate



Item No.: 850-816/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate

Item No.: 850-817/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate

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

Current addresses can be found at: www.wago.com